



**OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION**

WASHINGTON, D.C. 20460

January 17, 2024

Michael Kellogg  
Agent for Alligare, LLC  
c/o Pyxis Regulatory Consulting, Inc.  
4110 136<sup>th</sup> St. Ct., NW  
Gig Harbor, WA 98332

**Subject:** Label Amendment – Revise and add language required for California registration, specify maximum single and annual applications rates for non-crop uses, add ground application spray drift language, remove global restriction for mechanically pressurized handguns and add to apples use section only, update language about restriction on soils with <1% organic matter, and other label edits

Product Name: Alligare Sulfentrazone 4SC

EPA Registration Number: 81927-86

Application Dates: March 18, 2022; April 28, 2023

Case Numbers: 472385; 473863

Dear Michael Kellogg:

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

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

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

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

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

If you have any questions, please contact Endia Blunt at [blunt.endia@epa.gov](mailto:blunt.endia@epa.gov) or at 202-566-2505.

Sincerely,

A handwritten signature in black ink, appearing to read "Mindy Ondish".

Mindy Ondish  
Product Manager 23  
Herbicide Branch  
Registration Division (7505T)  
Office of Pesticide Programs

Enclosure

**Master Label includes:**

**Sublabel A: All uses (p. 1-65)**

**Sublabel B: Turf & Non-crop uses** (for use on Turfgrasses, Railroad, Highway, Roadside, Pipeline and Utility Rights of Way, Industrial Areas, Fence Rows, and Other Listed Non-Crop Sites) **(p. 66-84)**

**Container Base Label (p. 85)**

SULFENTRAZONE

GROUP

14

HERBICIDE

## Alligare Sulfentrazone 4SC

*[Alternate Brand Names: SOLANO™ Herbicide, PASSAGE™ Herbicide]*

EPA Reg. No. 81927-86

EPA Est. No.

**Manufactured for:**

Alligare, LLC  
1565 5th Avenue  
Opelika, AL 36801

**A C C E P T E D**

01/17/2024

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No. 81927-86

**[Sublabel A: All uses]**

*[Note to reviewer: [Text] in brackets denotes optional text].*

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

**{[BOOKLET FRONT PANEL LANGUAGE]}**

SULFENTRAZONE	GROUP	<b>14</b>	HERBICIDE
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## Alligare Sulfentrazone 4SC

**[Alternate Brand Names: SOLANO™ Herbicide, PASSAGE™ Herbicide]**

[Asparagus, Berries (Crop Group 13-07), Brassica (Head and Stem), Brassica (Leafy Greens), Cabbage (Transplanted Only), Citrus (Crop Group 10-10), Corn (Field, Seed, Pop), Beans and Peas (Dry Shelled), Fallow or Post Harvest Burndown, Flax, Fruiting Vegetables (except cucurbits) and Okra, Grapes, Horseradish, Lima Beans (Succulent), Melons, Mint, Peanuts, Potatoes, Rhubarb, Soybean, Peas (Succulent), Sugarcane, Sunflower, Tobacco, Tomato, Tree Nuts, Turnips, Wheat (Spring), Vegetable Soybean (Edamame), Turfgrasses, Railroad, Highway, Roadside, Pipeline and Utility Rights of Way, Industrial Areas, Fence Rows, and Other Listed Non-Crop Sites]

<b>ACTIVE INGREDIENT:</b>	<b>By Wt.</b>
Sulfentrazone.....	39.6%
<b>OTHER INGREDIENTS:</b> .....	60.4%
<b>TOTAL:</b> .....	100.0%

Contains 4 pounds of active ingredient per gallon

### KEEP OUT OF REACH OF CHILDREN CAUTION

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

FIRST AID	
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison center or doctor.</li><li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li></ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.	

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

**EPA Reg. No. 81927-86**

**EPA Est. No.:**

**Manufactured for:**

Alligare, LLC  
1565 5th Avenue  
Opelika, AL 36801

**Net Contents:**

## {LANGUAGE INSIDE BOOKLET}

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

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

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators, mixers, loaders, and other pesticide handlers must wear:

- long sleeved shirt and long pants;
- waterproof gloves; and
- shoes plus socks.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. **DO NOT** reuse 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:

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

#### PHYSICAL OR CHEMICAL HAZARDS

**DO NOT** mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur. **DO NOT** use or store near heat or open flame.

# 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.

**DO NOT** apply more than the allowed amount of this product per acre per twelve-month period as stated in Table 4. The twelve-month period is considered to begin upon the initial application of this product.

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 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, including plants, soil, or water is:

- coveralls over long-sleeved shirt and long pants,
- waterproof gloves
- 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.

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

## WEED RESISTANCE MANAGEMENT

For resistance management, Alligare Sulfentrazone 4SC is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to Alligare Sulfentrazone 4SC 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.

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.

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

- Rotate the use of Alligare Sulfentrazone 4SC 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 with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.

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

Report any incidence of non-performance of this product against a particular weed species to your Alligare, LLC retailer or 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.

Contact your local sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to these MOAs have been found in your region. **DO NOT** assume that each listed weed is being controlled by multiple mechanisms of action. Co-formulated active ingredients are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredient in this product.

### PRODUCT INFORMATION

Alligare Sulfentrazone 4SC is a selective, soil-applied herbicide for the control of susceptible broadleaf grass and sedge weeds. This product is formulated containing 4 pounds per gallon of the active ingredient sulfentrazone. If adequate moisture (1/2" to 1") from rainfall or irrigation is not received within 7 to 10 days after treatment with this product, a shallow incorporation may be needed to obtain desired weed control. When activating moisture is received after dry conditions this product will provide a reduced level of control of susceptible germinating weeds. Soil applications of this product must be made before crop seed germination to prevent injury to the emerging crop seedlings. When applications after planting are delayed injury may occur if seeds are germinating or if they are located near the soil surface.

**Proper handling instructions: DO NOT** mix or load this product within [50 feet] [(100 feet [in California])] of any wells (including abandoned wells and drainage wells), sinkholes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pads or properly diked mixing/loading areas.

Operations that involve mixing, loading, rinsing or washing of this product into or from pesticide handling or application equipment or containers within [50 feet] [(100 feet [in California])] of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater and rainwater that may fall on the pad.

Surface water shall not be allowed to either flow over or from the pad which means the pad must be self

contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specific minimum containment capacities **DO NOT** apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment. This product must be used in a manner that will prevent back siphoning in wells, spills or improper disposal of excess pesticide spray mixtures or rinsates.

### **APPLICATION INSTRUCTIONS**

Alligare Sulfentrazone 4SC may be applied to soil as a preplant incorporated treatment or as a pre emergence (prior to weed and/or crop emergence) surface application. Additional application methods include post plant treatments, over-the-top and lay-by in various crops. Application methods are defined in the following Crop Use Directions sections.

Preplant incorporated treatments require a uniform surface application followed by incorporation. **DO NOT** incorporate to a depth greater than 2 inches which may result in poor weed control. Take care not to create overlaps in treated zones due to soil movement which will result in excessive rates of this product that could result in adverse crop response.

All soil applications and the residual activity of post plant applications of this product require adequate moisture for herbicidal activation. The ultimate amount of moisture, whether supplied by rainfall or irrigation, is dependent on several factors. These factors include, but are not limited to, existing soil moisture at application, soil type, organic matter, and tillage. In crop situations dependent on rainfall, this product can await activating moisture for extended periods (10 to 14 days or longer) depending on the soil parameters described above. Once activated this product will provide activity on existing weeds. The level of activity will depend on the weed species and their size at time of activation. Where irrigation is not available and rainfall has not provided activation, particularly for surface applications of this product, a shallow incorporation is advised for destruction of any germinating weeds and to incorporate this product. Herbicide incorporation will initiate the process of activation with existing soil moisture. In circumstances where prolonged periods without rainfall and/or irrigation is not possible alternative or additional weed management practices (cultivation or post applied herbicides) may be required.

Exercise extreme care and follow the Crop Specific Use Directions exactly in crops allowing post plant applications of this product. Over-the-top and lay-by applications will provide contact and residual weed control depending on species. The addition of surfactants may increase contact weed control performance, but may also increase the risk of adverse crop response as well.

### **ALLIGARE SULFENTRAZONE 4SC PRODUCT USE DIRECTIONS**

The following directions for the selection of this product's application rates are critical to achieve maximum performance and to insure maximum crop safety. The user is required to read and follow the specific use directions and restrictions for each crop as defined in subsequent sections of this label. The user is cautioned that some crops respond differently to this product. This response is governed by the application rate, various soil factors and inherent crop sensitivity. The Crop Specific Use Directions have been designed to minimize the risk of adverse crop response while maintaining optimum weed control.

#### **Mode of Action**

Sulfentrazone, the active ingredient in this product, is a potent inhibitor of the enzyme Protoporphyrinogen Oxidase IX (PPO IX) required for the formation of chlorophyll. Inhibition of PPO IX enzyme results in the liberation of singlet oxygen (O) that in turn disrupts cellular membranes and causes cellular leakage. The ultimate manifestation of the process is cellular death leading to plant death. The selective herbicidal activity of Sulfentrazone is based on its greater affinity for the PPO IX enzyme in weed species versus crop plants.

#### **Mechanism of Action**

Following the application of this product to soil germinating seeds and seedlings take up Sulfentrazone from the soil solution. The amount of Sulfentrazone in soil solution and available for weed uptake is determined primarily by soil type, organic matter, and soil pH. Sulfentrazone adsorbs to the clay and organic matter



(OM) fractions of soils effectively limiting the amount of active ingredient immediately available to control weeds. Soils typically increase in clay content through the series from coarse to fine as noted in the following Soil Classification Chart Table 1.

**SOIL CLASSIFICATION CHART**

**Table 1**

<u>COARSE</u>	<u>MEDIUM</u>	<u>FINE</u>
Sand	Sandy clay loam	Silty clay loam
Loamy sand	Sandy clay	Silty clay
Sandy loam	Loam	Clay loam
	Silt loam	Clay
	Silt	

**Influence of Soil type organic matter and pH on Alligare Sulfentrazone 4SC Use Rates and Crop Response**

Soil organic matter content can vary widely and independently of soil type and requires an accurate analysis of representative soil samples to determine its content.

Soil pH also exerts a dramatic affect on Sulfentrazone availability in the soil solution. As soil pH increases Sulfentrazone availability increases. Accurate soil pH information will require an accurate analysis of representative soil samples.

The total amount of Sulfentrazone available in solution many given soil is determined by the interaction of soil type (clay content), % organic matter, and pH. The application timing (relative to the emergence of the crop and weeds) and amount of rainfall and/or irrigation received will ultimately determine, in conjunction with the soil parameters and pH, the amount of Sulfentrazone in soil solution. It is important to note that this product can await activating moisture. However, diminished weed control may result due to the successive increase in weed growth versus timing of activation.

It is important to note that irrigation with highly alkaline water (high pH) following a soil application of this product can also significantly increase the amount of Sulfentrazone available in the soil solution. Irrigation with water having a pH greater than 7.5 could result in adverse crop response. This response will ultimately depend on initial application rate, timing, amount, and pH of irrigation water and sensitivity of the crop and its growth stage when irrigated. The risk of adverse crop response will lessen with the advance in growth stage among most crops.

The following Crop Specific Use Directions have been designed with specific specifications for each crop based on the soil type, soil organic matter, and soil pH interactions described above. The user is cautioned that crop tolerance and weed control performance are based on strict adherence to these specifications.

**APPLICATION AND RESTRICTION INFORMATION**

**Ground Application**

Utilize a boom and nozzle sprayer equipped with the appropriate nozzles, spray tips, and screens and adjusted to provide optimum spray distribution and coverage at the appropriate operating pressures. Utilize nozzles that produce minimal amounts of fine spray droplets to avoid spray drift or inadequate foliar and/or soil coverage. Apply a minimum of 10 gallons of finished spray per acre by ground. Be aware that overlaps and slower ground speeds while Starting, stopping, or turning while spraying may result in excessive application and subsequent crop response.

**DO NOT** apply when wind speed favors drift beyond the area intended for treatment.

**Aerial Application**

Use nozzle types and arrangements that will provide optimum coverage while producing a minimal amount of fine droplets. Apply sufficient spray volume to achieve adequate coverage. Apply a minimum of 5 gallons of finished spray per acre.

**DO NOT** apply when wind speed favors drift beyond the area intended for treatment.

## CHEMIGATION APPLICATION

Alligare Sulfentrazone 4SC 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 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.

It is important to note that irrigation with highly alkaline water (high pH) following a soil application of this product can also significantly increase the amount of Sulfentrazone available in soil solution. Irrigation with water having a pH greater than 7.5 could result in adverse crop response. This response will ultimately depend on initial application rate, application timing, amount, and pH of the irrigation water and the sensitivity of the crop and the growth stage when irrigated. The risk of adverse crop response will lessen with advancing growth stages of most crops.

## SPRINKLER CHEMIGATION RESTRICTIONS

- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, including a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.

Meter this product into the irrigation system continuously for the duration of the water application. Dilute this product in sufficient volume to insure 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. Conduct a jar test 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 THIS PRODUCT 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. This product 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 of 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.

**Application with Dry Fertilizers**

This product may be applied impregnated on dry fertilizers. When this product is applied as directed with adequate soil coverage, dry bulk fertilizer mixtures will provide satisfactory weed control.

Follow all label directions regarding product use rates per acre, registered crops, incorporation, special instructions, and precautions.

**Note: Apply Alligare Sulfentrazone 4SC /dry fertilizer mixtures with ground equipment only.**

All individual state regulations relating to dry bulk fertilizer blending, registration, labeling, and application are the responsibility of the individual and/or company preparing, storing, transporting, selling, or applying the Alligare Sulfentrazone 4SC/dry fertilizer mixture.

**Impregnation Directions**

To impregnate this product on dry bulk fertilizer use a closed rotary drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment.

Prepare a slurry of this product in a clean container using clear water. Slowly add the Alligare Sulfentrazone 4SC/water slurry to the impregnation spray tank and finish filling as needed with clear water. Spray nozzles must be placed to provide uniform coverage of this product onto the fertilizer during mixing.

Refer to the SPRAYER EQUIPMENT CLEAN OUT section for directions for cleaning impregnation equipment, transport equipment, loading equipment, and application equipment.

Apply the Alligare Sulfentrazone 4SC dry bulk fertilizer with an accurately calibrated dry fertilizer spreader. The Alligare Sulfentrazone 4SC dry bulk fertilizer mixture must be spread uniformly on the soil surface. Uneven spreading leaving untreated areas can cause poor weed control or overlapping areas with potential increased use rates of this product could result in possible crop response.

A minimum of 200 pounds of dry bulk fertilizer impregnated with the listed amount of this product must be applied per acre to achieve adequate soil coverage for satisfactory weed control.

**DO NOT** impregnate this product onto coated ammonium nitrate or limestone because these materials will not absorb the herbicide.

Refer to the appropriate crop section of this product’s label to determine the rate of Alligare Sulfentrazone 4SC to be applied per acre. Use the following table to determine the amount of this product to be impregnated on a ton (2000 pounds) of dry bulk fertilizer based on the rate of fertilizer that will be applied per acre.

For those rates not listed in the following table calculate the amount of this product to be impregnated on a ton of dry bulk fertilizer using the following formula:

$$\frac{2000}{\text{Pounds dry fertilizer per acre}} \times \text{Alligare Sulfentrazone 4SC use rate in fluid ounces per acre} = \text{Fluid ounces of Alligare Sulfentrazone 4SC to be applied per ton of fertilizer}$$

**RATE CHART FOR IMPREGNATION OF DRY BULK FERTILIZERS WITH ALLIGARE SULFENTRAZONE 4SC**

**Table 2**

Dry Fertilizer (lb/acre)	Fluid Ounces Alligare Sulfentrazone 4SC per ton of fertilizer		
	Alligare Sulfentrazone 4SC Use Rate Per Acre		
	8.0 Fluid Ounces per Acre	10.1 Fluid Ounces per Acre	12.0 Fluid Ounces per Acre
200	80	101	120
250	64	80.8	96
300	53.3	67.3	80

350	45.7	57.7	68.6
400	40	50.5	60
450	35.6	44.9	53.3

### Application with Liquid Fertilizer

Alligare Sulfentrazone 4SC may be applied using liquid fertilizer solutions as the carrier. The fertilizer solutions may either be concentrate formulations as blended or diluted with water. When applied as directed with adequate soil coverage, this product applied with liquid fertilizer mixtures will provide satisfactory weed control. However, adequate soil coverage is essential to achieve acceptable levels of weed control.

Herbicide mixing, solution stability, and/or compatibility problems can occur when liquid fertilizers are used as a carrier. Compatibility tests must be conducted prior to mixing to insure tank mixture compatibility and stability. The use of compatibility agents may be beneficial to achieve and maintain a homogenous solution.

### Mixing Instructions for Liquid Fertilizer Applications

Fill the clean spray tank to one half of the total volume with the fertilizer solution. Start the spray tank agitation system. Prepare a slurry of this product in a clean container with clean water using equal volumes of this product and clean water. Slowly add the Alligare Sulfentrazone 4SC/water slurry to the spray tank. Carefully rinse the slurry container adding the rinsate to the spray tank. Better mixing of the Alligare Sulfentrazone 4SC/water slurry may be achieved if the slurry is added using induction systems on the sprayer fill plumbing system.

Complete filling the spray tank to the desired level. Sufficient and continuous spray tank agitation is required at all times to maintain a homogenous spray solution. The spray system must be designed such that there is sufficient flow capacity to uniformly apply the spray mixture and maintain adequate tank agitation. Some systems may require separate pumps to simultaneously supply the spray system and the spray tank agitation system. Insure the Alligare Sulfentrazone 4SC slurry is thoroughly mixed before application.

For tank mixtures with other herbicides, a compatibility test must be conducted to insure product compatibility before mixing. Read and follow all the directions, precautions, and restrictions of the tank mixture products prior to mixing.

Apply the Alligare Sulfentrazone 4SC spray mixture immediately after mixing. **DO NOT** store the sprayer overnight or for any extended period of time with the Alligare Sulfentrazone 4SC spray mixture remaining in the tank.

**DO NOT** premix this product's spray solutions in nurse tanks.

Follow all label directions regarding product use rates per acre, registered crops application instructions, incorporation directions, special instructions and all precautions.

All individual state regulations relating to liquid fertilizer blending, storage, transportation, registration, labeling, and application are the responsibility of the individual and/or company preparing selling or applying the Alligare Sulfentrazone 4SC and fertilizer mixture.

**[Note to reviewer: the following California-specific restrictions language may or may not appear on final labeling for product(s) registered outside of California]**

### [CALIFORNIA SPECIFIC RESTRICTIONS

**Runoff Groundwater Protection Areas: DO NOT** apply Alligare Sulfentrazone 4SC in areas defined by the California Department of Pesticide Regulation as being "runoff groundwater protection areas\*" unless one of the following management practices can be met:

- 1) **Soil disturbance:** The treated soil is distributed within 7 days of application using a disc, harrow, rotary tiller or other mechanical device. This subsection does not apply to the area to be treated this is immediately adjacent to the crop row and that does not exceed 33% of the distance between crop row or in citrus, to the band from the tree row to the dripline; or
- 2) **Pesticide incorporation:** 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 when 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 to wells on the treated property; or

- 3) **Band treatment:** This product is applied as a band treatment immediately adjacent to the crop row so that no more than 33% 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
- 4) **Timing of application:** This product is applied between April 1<sup>st</sup> and July 31<sup>st</sup>; or
- 5) **Retention of runoff on field:** For 6 months post-application, the field shall be designed to retain all irrigation runoff and all precipitation on, and drainage through the field by berms, levees, or non-draining circulation systems. The retention area on the field shall not have a percolation rate of more than 0.2"/hour (5"/24 hours); or
- 6) **Retention of runoff in a holding area off the field:** For 6 months post-application, all runoff shall be channeled to a holding area off of 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"/hour (5"/24 hours); or
- 7) **Runoff onto a fallow field:** For 6 months post-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 6 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 this product 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 6 months or more before the basin is used to recharge ground water.

#### **Unlined Canals and Ditches**

**DO NOT** use this product below the high water lined 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 inches per hour (0.002 gallons per minute per square foot), or (b) the pesticide is applied 6 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 6 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 complied 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 designed by the California Department of Pesticide Regulation as leaching ground water protection areas\* unless either:

- 1) The user does not apply any irrigation water for 6 months following the application of this product; or
- 2) 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 6 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
- 3) 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 6 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 [www.cdpr.ca.gov/docs/emon/grndwtr/gwp.regs.htm](http://www.cdpr.ca.gov/docs/emon/grndwtr/gwp.regs.htm).]

## **SPRAY DRIFT**

- 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.
- Applicators may spray only when wind speed is between 3 and 10 mph.
- **DO NOT** apply as spray droplets smaller than medium to coarse (defined by the ASABE standard).

### Ground Applications:

- Ground applicators must use a minimum finished spray volume of 10 gallons per acre.
- For boom spraying on agricultural sites, the maximum release height must be 30 inches from the soil.
- For boom spray applications to non-crop sites, making applications at the lowest height that produces a uniform spray pattern will reduce exposure of droplets to evaporation and wind.
- When sulfentrazone is tank mixed with a contact burndown herbicide, ground applicators must use a minimum spray volume of 15 gallons per acre.

### Aerial Applications:

- Aerial application is allowed only when environmental conditions prohibit ground application.
- 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.
- When this product is allowed to be applied by air, applicator must use a minimum finished spray volume of 5 gallons per acre.

## **SPRAY DRIFT REDUCTION ADVISORY**

### **AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR AND THE GROWER**

The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when in making decisions. 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  $\frac{3}{4}$  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.
4. Applications must observe and abide by the requirements of the Aerial Drift Reduction Advisory.

### **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 recommended 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  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application Height** - Aerial applications should not be made at a height greater than 10 feet above the top of the target plant canopy unless a greater height is required for aircraft safety. In 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.

**Sensitive Areas** - The pesticide should only be applied when the wind is blowing away from sensitive areas (e.g. residential areas, bodies of water, known habitats for threatened or endangered species, non-target crops.)

#### **Off Target Movement of Alligare Sulfentrazone 4SC**

Drift of dilute spray mixtures containing this product must be prevented. Observation of the preceding environmental conditions, correct application equipment design, calibration and application practices will

significantly diminish the risk of off target spray drift. This product can cause significant symptomology by drift on to sensitive crops and other plants. This symptomology may manifest initially as discreet, localized spots where contacted by this product drift mixtures. Depending on concentration of the spray solution and droplets size (effectively determining the dosage of Sulfentrazone) and also depending on the inherent sensitivity of the plants involved, these spots or lesions may or may not coalesce. These effects will usually not have lasting effects on plant growth, but will likely reduce the value of affected fruit or foliage where grade or quality is associated with appearance. In severe drift instances with particularly sensitive crops, defoliation of affected foliage could result. Failure to follow these guidelines and environmental prohibitions that then result in off-target movement or drift of this product on to unintended crops or plants, irrespective of severity, constitutes misapplication of this product. Alligare, LLC accepts no responsibility or liability for potential crop effects that may result from such misapplication of this product.

**MAXIMUM ALLOWABLE ALLIGARE SULFENTRAZONE 4SC USE PER ACRE PER 12-MONTH PERIOD\***

Refer to the crop section of this label for specific product use directions.

**Table 3**

<b>Crop</b>	<b>Fluid Ounces Alligare Sulfentrazone 4SC Per Acre</b>	<b>Pounds Active Sulfentrazone Per Acre</b>
<b>Row Crops</b>		
Corn	12.0	0.375
Fallow	8.0	0.25
Peanuts	9.6	0.30
Potatoes	8.0	0.25
Soybeans	12.0	0.375
Sugarcane	12.0	0.375
Sunflower, subgroup 20B	8.0	0.25
Tobacco	12.0	0.375
Wheat, spring (Pacific Northwest states. ID, OR, WA only)	6.0	0.19
<b>Vegetable Crops</b>		
Asparagus	12.0	0.375
Brassica, head and stem (Broccoli and Cabbage)	12.0	0.375
Brassica, leafy greens	6.4	0.20
Cowpeas, succulent (Tennessee only)	6.0	0.19
Dry Beans & Peas	8.0	0.25
Fruiting Vegetables and Okra (except cucurbits)	12.0	0.375
Horseradish	8.0	0.25
Lima beans, Succulent (Tennessee only)	6.0	0.19
Melons	8.0	0.25



<b>Crop</b>	<b>Fluid Ounces Alligare Sulfentrazone 4SC Per Acre</b>	<b>Pounds Active Sulfentrazone Per Acre</b>
Rhubarb	8.0	0.25
Strawberry	12.0	0.375
Succulent Peas	6.0	0.19
Turnips	8.0	0.25
<b>Oil Crops</b>		
Flax	12.0	0.375
Mint	12.0	0.375
<b>Turf</b>		
Sod Production	12.0	0.375
<b>Permanent Crops</b>		
Apples	12.0	0.375
Berries	12.0	0.375
Citrus	12.0	0.375
Grapes	12.0	0.375
Tree Nuts	12.0	0.375

\*The total allowed usage per twelve-month period includes all applications made to the field per twelve-month interval. This includes fallow treatments, burndown treatments, planting time, and all in annual treatments. The twelve-month period is considered to begin upon the initial Alligare Sulfentrazone 4SC application.

#### **CROP ROTATIONAL RESTRICTIONS**

The following table 4 shows the minimum interval in months from the time of the last application of this product until treated soil can be replanted to the crops listed. When this product is tank mixed with another herbicide, refer to the partner label for recropping instructions, following the directions that are most restrictive.

For all other crops not listed below, the rotational interval is a minimum of 12 months. Some crops have rotational intervals greater than 12 months after an application of this product due to potential crop injury. A representative bioassay of the field shall be completed with the rotational crop to accurately determine the planned crop's sensitivity to Sulfentrazone.

#### **CROP ROTATIONAL RESTRICTIONS\*\***

**Table 4**

<b>Crop</b>	<b>Interval (Months)</b>
Alfalfa	12
Asparagus	Anytime
Barley	4
Berries	Anytime
Brassica, head and stem (Broccoli and Cabbage)	Anytime
Brassica, leafy green	Anytime
Canola	24
Cereal Grains (Buckwheat, Oats, Pearl Millet, Proso Millet, Teosinte, Wild Rice)	12
Citrus	Anytime
Corn, Field	10

<b>Crop</b>	<b>Interval (Months)</b>
Corn, Pop	18
Corn, Sweet	18
Cotton	18
Cowpea, succulent (Tennessee only)	Anytime
Dry Shell Peas and Beans	Anytime
Flax	Anytime
Fruiting Vegetables (Except cucurbits)	Anytime
Grapes	Anytime
Horseradish	Anytime
Lima beans, succulent (Tennessee only)	Anytime
Melons	Anytime
Mint	Anytime
Peanuts	Anytime
Potatoes	Anytime
Rhubarb	Anytime
Rice	10
Rye	4
Sorghum	10*
Soybeans	Anytime
Strawberry	Anytime
Succulent peas	Anytime
Sugar Beets	36
Sugarcane	Anytime
Sunflower, subgroup 20B	Anytime
Sweet Potatoes	12
Triticale	4
Tobacco	Anytime
Tree Nuts	Anytime
Turf	Anytime
Turnips	Anytime
Wheat	4
Wheat, spring (Pacific Northwest States. ID, OR, WA only)	Anytime

\*Sorghum – 18 month rotation for rates above 8.0 fluid ounces/acre  
For all other crops not listed, the rotation interval is a minimum of 12 months.

### **BAND TREATMENT APPLICATIONS**

For band treatments, apply the broadcast equivalent rate and volume per acre. To determine these

$$\frac{\text{Band Width (Inches)}}{\text{Row Width (Inches)}} \times \text{Broadcast Rate Per Acre} = \text{Band Rate}$$

$$\frac{\text{Band Width (Inches)}}{\text{Row Width (Inches)}} \times \text{Broadcast Volume Per Acre} = \text{Band Volume}$$

### MIXING AND LOADING INSTRUCTIONS

This product may be applied alone or in tank mixtures with other herbicides for the control of additional weed species. Mixtures with some other pesticides have not been tested. Conduct appropriate compatibility tests prior to tank mixing with other pesticides. Follow all precautions and restrictions on the tank mix partner label.

It is important that spray equipment is clean and free of existing pesticide residues before preparing spray mixtures. Follow the spray tank clean out procedures specified on the label of the product or products previously applied.

For best results fill spray tank with one half of the volume of clean water needed for the field to be treated. Start agitation system. Prepare a slurry of this product in a clean container using clean water. Slowly add the Alligare Sulfentrazone 4SC/water slurry to the spray tank. Carefully rinse the slurry container adding the rinsate to the spray tank. Complete filling the spray tank to the desired level. Continuous spray tank agitation is required at all times to maintain a uniform spray solution. Make sure this product is thoroughly mixed before application or before adding another product to the spray tank.

Use the spray mixture immediately after mixing. **DO NOT** store the sprayer overnight or for any extended period of time with the spray mixture remaining in the tank.

**DO NOT** premix spray solutions of this product in nurse tanks.

If this product is tank mixed with other herbicides, all additional directions, restrictions, and precautions for the tank mixture herbicides must be followed.

### TANK MIXING RESTRICTIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures 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.

### SPRAYER EQUIPMENT CLEAN-OUT

As soon as possible after spraying this product and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned to avoid potential crop affects using the following procedure. Residues left in mixing equipment, spray tanks, hoses, spray booms, and nozzles can cause crop effects if they are not properly cleaned. In addition, users must take steps to ensure proper equipment clean out for any other products mixed with this product as required on the other product labels. More complete cleaning can be achieved if the spray system is cleaned immediately following the application.

1. Drain sprayer tank, hoses, spray boom, and spray nozzles. Use a high pressure detergent wash to remove physical sediment and residues from the inside of the sprayer tank and thoroughly rinse. Then thoroughly flush sprayer hoses, spray boom, and spray nozzles with a clean water rinse. Remove and clean spray tips and all filters and screens (tank, spray hose, and spray tips) separately in the ammonia solution of Step 2.
2. Next prepare a sprayer cleaning solution by adding three gallons of ammonia (containing at least 3% active) per 100 gallons of clean water. Prepare sufficient cleaning solution to allow the operation of the spray system for a minimum of 15 minutes to thoroughly flush hoses, spray boom, and spray nozzles.
3. Convenient and thorough cleaning of the sprayer can be achieved if the ammonia solution or fresh water is left in the spray tank, hoses, spray booms, and spray nozzles overnight or during storage.
4. Before using the sprayer, completely drain the sprayer system. Rinse the tank with clean water and flush through the hoses, spray boom, and spray nozzles with clean water. Remove and clean spray tips and all filters and screens (tank, spray hose, and spray tip) separately in an ammonia solution.

5. Properly dispose of all cleaning solution and rinsate in accordance with Federal, State, and local regulations and guidelines.

**DO NOT** apply sprayer cleaning solutions or rinsate to sensitive crops.

**DO NOT** store the sprayer overnight or for any extended period of time with spray solution of this product remaining in the tank, spray lines, spray boom, plumbing, spray nozzles, or strainers.

If the sprayer has been stored or idle, purge the spray boom and nozzles with clean water before beginning any application.

Should small quantities of this product remain in inadequately cleaned mixing, loading, and/or spray equipment, they may be released during subsequent applications potentially causing effects to certain crops and other vegetation. Alligare, LLC accepts no liability for any effects due to inadequately cleaned equipment.

**DO NOT** drain or flush equipment on or near desirable trees or plants.

**DO NOT** contaminate any body of water including irrigation water that may be used on other crops.

### WEEDS LIST

When this product is applied in accordance with the Application information and the specific crop use directions, this product applied alone or in listed tank mixtures will provide control of the following weeds. Refer to the specific crop section.

**Table 5**

<b>Common Name</b>	<b>Scientific Name</b>
Amaranth, livid	<i>Amaranthus lividus</i>
Amaranth, Palmer	<i>Amaranthus palmeri</i>
Amaranth, Powell	<i>Amaranthus Powellii</i>
Amaranth, spiny	<i>Amaranthus spinosus</i>
Amaranth, spleen	<i>Amaranthus dubius</i>
Anoda, spurred	<i>Anoda cristata</i>
Bedstraw, catchweed	<i>Galium aparine</i>
Carpetweed	<i>Mollugo verticillata</i>
Chickweed, common	<i>Stellaria media</i>
Copperleaf, hophornbeam	<i>Acalypha ostryaeifolia</i>
Copperleaf, Virginia	<i>Acalypha virginica</i>
Crabgrass, large	<i>Digitaria sanguinalis</i>
Crabgrass, smooth	<i>Digitaria ischaemum</i>
Crabgrass, Southern	<i>Digitaria ciliaris</i>
Croton, tropic	<i>Croton glandulosus</i>
Crownbeard, golden	<i>Verbesia encelioides</i>
Cupgrass, wooly	<i>Eriochloa villosa</i>
Cyperus, hedgehog	<i>Cyperus compressus</i>
Daisy, American	<i>Eclipta alba</i>
Devilsclaw	<i>Proboscidea louisiana</i>
Dock, curly	<i>Rumex crispus</i>
Eclipta	<i>Eclipta prostrata</i>
Filaree, redstem	<i>Erodium cicutarium</i>
Flixweed	<i>Descurainia sophia</i>

<b>Common Name</b>	<b>Scientific Name</b>
Galinsoga, hairy	<i>Galinsoga ciliata</i>
Goosegrass	<i>Eleusine indica</i>
Groundcherry, clammy (seedling)	<i>Physalis heterophylla</i>
Groundcherry, cutleaf	<i>Physalis angulata</i>
Jimsonweed	<i>Datura stramonium</i>
Kochia (ALS and Triazine Resistant)	<i>Kochia scoparia</i>
Ladysthumb	<i>Polygonum persicaria</i>
Lambsquarters, common	<i>Chenopodium album</i>
Lettuce, miners	<i>Montia peifoliata</i>
Mallow, common	<i>Malva neglecta wall r.</i>
Mayweed, Chamomile	<i>Anthemis cotula l</i>
Milkweed, honeyvine	<i>Ampelamus albidus</i>
Morningglory, entireleaf	<i>Ipomoea hederacea integruscula</i>
Morningglory, ivyleaf	<i>Ipomoea hederacea hederacea</i>
Morningglory, palmleaf	<i>Ipomoea wrightii</i>
Morningglory, purple	<i>Ipomoea turbinata</i>
Morningglory, red	<i>Ipomoea coccinea L.</i>
Morningglory, scarlet	<i>Ipomoea coccinea</i>
Morningglory, smallflower	<i>Jacquemontia tamnifolia</i>
Morningglory, tall	<i>Ipomoea purpurea</i>
Mustard, tumble	<i>Sisymbrium allissimum</i>
Nightshade, black	<i>Solanum nigrum</i>
Nightshade, Eastern black	<i>Solanum ptycanthum</i>
Nutsedge, purple	<i>Cyperus rotundus</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>
Orchardgrass	<i>Dactylis glomerata</i>
Panicum, fall	<i>Panicum dichotomiflorum</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Plantain, blackseed	<i>Plantago rugelii decne</i>
Plantain, narrow leaved	<i>Plantago lanceolata</i>
Poorjoe	<i>Diodia teres</i>
Porophyllum	<i>Porophyllum rederale</i>
Poinsettia, wild	<i>Euphorbia heterophylla</i>
Purslane, common	<i>Poitulaca oleracea</i>
Redmaids	<i>Calandrinia ciliata</i>
Redweed	<i>Melochia corchorifolia</i>
Sedge, annual	<i>Carex spp.</i>
Senna, coffee	<i>Cassia occidentalis</i>
Sheperdspurse	<i>Capsella bursa pastoris</i>

<b>Common Name</b>	<b>Scientific Name</b>
Sida, prickly	<i>Sida spinosa</i>
Sida, Southern	<i>Sida acuta</i>
Signalgrass, broadleaf	<i>Brachiana platyphylla</i>
Smartweed, PA (seedling)	<i>Polygonum pensylvanicum</i>
Smellmellon	<i>Cucumis melo</i>
Starbur, bristly	<i>Acanthospermum hispidum</i>
Stinkgrass	<i>Eragrostis cilianensis</i>
Toadflax, yellow	<i>Linana vulgaris</i>
Tassleflower, red	<i>Emilio sonchifolia</i>
Thistle, Russian	<i>Salsola kali</i>
Waterhemp, common	<i>Amaranthus rudis</i>
Waterhemp, tall	<i>Amaranthus tuberculatos</i>
Waterprimrose, winged	<i>Ludwigia decurrens</i>
Witchgrass	<i>Panicum capillare</i>

### REPLANTING INSTRUCTIONS

If initial planting of labeled crops fails to produce a stand, only labeled crops for this product or the tank mix partner, whichever is most restrictive may be planted. **DO NOT** retreat field with this product or other herbicide containing sulfentrazone. **DO NOT** plant treated fields with any crop at intervals that are inconsistent with the Rotational Crop Guidelines on this label. When replanting use minimum soil tillage to preserve the herbicide barrier and achieve maximum weed control.

### ROW CROPS

**CORN (Field Corn, Seed Corn, Popcorn) (For Use Only with GMO Varieties (Roundup-Ready, Liberty-Link, or other glyphosate and/or glufosinate-tolerant varieties) Tolerant to PPO Herbicides)**

**Table 6**

<b>Alligare Sulfentrazone 4SC Use Rate Table (Corn)</b>			
Fall, Spring Early Preplant, Preemergence, and Preplant Incorporated Applications			
<b>Broadcast Rate</b>	<b>Fluid Ounces Alligare Sulfentrazone 4SC per acre</b>		
	<b>Soil Texture</b>		
<b>% Organic Matter</b>	<b><u>Coarse</u></b>	<b><u>Medium</u></b>	<b><u>Fine</u></b>
<1.5	3.0 – 4.5	3.0 – 4.5	3.75 – 5.25
1.5 – 3.0	3.0 – 4.5	3.75 – 6.0	4.5 – 6.75
>3.0	3.75 – 6.0	4.5 – 6.75	6.0 – 8.0

Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

### Preplant (Fall Applications)

This product may be applied in the fall as a preplant treatment prior to corn planting the following spring.

This product can be used alone or in a tank mixture with other herbicides to control susceptible broadleaves, sedges, and grasses in corn. Apply this product in conventional tillage or conservation tillage (reduced tillage or no tillage) cropping systems using rates listed in the Table 6. This product may be applied to the stubble or soil surface and allow moisture from rainfall or snow to move the product into the soil. **DO NOT** mechanically incorporate in the fall or spring as this operation can destroy the herbicide barrier allowing

weed escapes to occur. **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application. This product may be tank mixed with other burndown herbicides to control emerged weeds in the fall or residual soil herbicides that are labeled for fall use on corn. Select the correct use rate for corn from the Table 6 for your soil type and organic matter. Due to the extended period of time between the fall application and corn planting use the mid to high use rate within the rate range for the in soil type and organic matter.

#### **Early Preplant and Preemergence (Spring Applications)**

This product may be applied preplant on the soil surface in the spring to control weeds in conventional and conservation tillage systems. This product can be applied from 45 days prior to planting until 3 days after planting as a preemergence, broadcast, or banded soil application if corn seedlings have not broken the soil surface and if the seed furrow is completely closed. For preemergence applications, 14 to 45 days prior to planting, use the mid to high rate in the in rate range for the soil and organic matter type listed in Table 6. This product can be tank mixed with other herbicides labeled for use in corn. To control insect pests, including cutworm or armyworm that may be present, this product may be tank mixed with insecticides including zeta-cypermethrin or bifenthrin. If dry conditions persist following preemergence application of this product, a shallow incorporation may be needed to activate the herbicide. If weeds are emerged at the time of application, use a burndown herbicide in conjunction with this product as needed. When planting into soil treated preplant with this product, minimize soil disturbance to maintain the herbicide barrier on the soil surface to achieve maximum weed control.

#### **Preplant Incorporated**

This product may be applied as a Preplant Incorporated treatment in the spring prior to planting in reduced and conventional tillage corn. This product must be shallowly incorporated or mixed thoroughly into the soil to a maximum depth of 2 inches using a correctly adjusted implement, including a field cultivator, field finisher, or disk harrow. Incorporating this product deeper than 2 inches may result in inconsistent weed control. Use the in rate from Table 6 for the soil texture, organic matter, and pH level of the soil. This product can be tank mixed with other soil applied herbicides and insecticides labeled for preplant incorporation in corn. This product may be applied more than once to the same crop in split or sequential applications to provide annual control of difficult to control existing or late emerging weeds.

#### **Precautions**

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

#### **Restrictions**

- The maximum single application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 6.0 fluid ounces/A.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

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#### **FALLOW OR POST HARVEST BURNDOWN**

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This product may be applied in the fall following crop harvest or in existing fallow fields of asparagus, cabbage, corn, dry shell peas and beans, horseradish, Limas, mint, peanuts, potatoes, soybeans, sugarcane, sunflowers, and tobacco.

**Table 7**

<b>Alligare Sulfentrazone 4SC Use Rate Table (Fallow or Post Harvest Burndown) Fall and Spring Fallow Applications</b>			
<b>Broadcast Rate</b>	<b>Fluid Ounces Alligare Sulfentrazone 4SC per acre</b>		
	<b>Soil Texture</b>		
<b>% Organic Matter</b>	<b>Coarse</b>	<b>Medium</b>	<b>Fine</b>
<1.5	3.0 – 3.75	3.0 – 4.5	3.75 – 5.25
1.5 – 3.0	3.75 – 5.25	3.75 – 6.0	4.5 – 6.75
>3.0	4.5 – 6.0	4.5 – 8.0	5.25 – 8.0
Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.			

**Fall Application (MN, ND, SD, MT, CO, NE, WY, ID, WA, OR, WI, MI)**

This product may be applied in the fall following crop harvest or in existing fallow fields to control or suppress weeds the following year. The Rotational Crop Guidelines in Table 4 must be followed if crops are planted the next year. Apply this product to the harvested crop stubble or soil surface without incorporation. Moisture in the form of rain or snow will move and activate the product. **DO NOT** mechanically incorporate in the fall or spring after application because this activity may destroy the herbicide barrier and weed escapes can occur. **DO NOT** apply to frozen soils to prevent runoff from rain or snow that may occur following application. This product may be tank mixed with herbicides to control emerged weeds. Sequential applications may be needed depending on weed size. In situations where weed size may interfere with this product reaching the soil surface, a separate burndown application prior to the application of this product will be required. Use listed rates of burndown herbicides in combination with this product or sequential applications as needed. Higher aerial spray volumes are required when there is a dense weed population or canopy.

This product can be tank mixed with other herbicides.

**Spring Preemergence Application**

This product may be applied as a fallow treatment early in the spring provided the application is made prior to weed emergence and adequate moisture is available to activate this product. Follow the same use rate specifications and application guidelines listed under the Fall Application section above.

**Weeds Controlled**

**When applied according to directions Alligare Sulfentrazone 4SC will provide control of:**

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

For information on other weeds not listed above, refer to Weeds Controlled section of this label.

**Precautions**

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

**Restrictions**

- The maximum single application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.



- The maximum annual application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 4.0 fluid ounces/A.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

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## PEANUTS

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

Apply this product alone or in combination with other registered herbicides for the control of key grass and broadleaf weeds in peanut production. Refer to the information below for specific use directions. This product is registered for use on peanuts only in the following states, AL, GA, MS, NC, SC, and VA.

#### **Application Instructions**

This product may be preplant incorporated (to a depth no greater than 2 inches) up to 14 days prior to planting. Alternatively, this product may be applied to the soil surface at planting or within 12 hours after planting. Incorporation of this product deeper than 2 inches can result in adverse crop response and/or inconsistent weed control. **DO NOT** use this product for at crack type applications or apply to exposed peanut tissue. Such use can result in significant adverse crop response. For optimum performance, a combination of this product plus a grass herbicide labeled for peanuts is advised. Under conditions of exceptionally high weed populations, or when weeds not controlled by this product are anticipated, the use of suitable post emergent peanut herbicides is advised. Broadcast apply the correct use rate from the tables below in a minimum of 10 gallons of water per acre of finished spray. Banded application rates must be adjusted in proportion to the broadcast rate.

#### **Alligare Sulfentrazone 4SC Use Rates and Weeds Controlled in coarse Soils<sup>1</sup>**

**When applied as directed at 4.8 fluid ounces (0.15 pound active ingredient) per acre Alligare Sulfentrazone 4SC will provide Control of the listed weeds.**

Amaranth, spleen	Jimsonweed
Copperleaf, hophornbeam	Lambsquarters, common
Croton, tropic	Morningglory, entireleaf
Crownbeard, golden	Morningglory, red
Devilsclaw	

**When applied as directed at 6.4 fluid ounces (0.2 pound active ingredient) per acre Alligare Sulfentrazone 4SC will provide Control of the listed weeds**

<b>All the weeds controlled at 4.8 fluid ounces Plus</b>	
Amaranthus, Palmer	Morningglory, smallflower
Crabgrass, large	Poinsettia, wild <sup>2</sup>
Crabgrass, Southern	Redweed
Eclipta	Senna, coffee
Goosegrass	Signalgrass, broadleaf
Morningglory, pitted	Smartweed, PA (seedling)

**When applied as directed at 8.0 fluid ounces (0.25 pound active ingredient) per acre Alligare**

**Sulfentrazone 4SC will provide Control of the listed weeds**

<b>All the weeds controlled at 6.4 fluid ounces Plus</b>	
Anoda, spurred	Purslane, common
Cocklebur, common	Sida, prickly
Nutsedge, yellow	Starbur, prickly
Nutsedge, purple <sup>3</sup>	

<sup>1</sup> Use rates are fluid ounces per acre. Specified weeds are controlled in coarse (sand and loamy sand) soils, for medium and fine soils (sandy loam, clay loam, clay), or soils with organic matter greater than 1.0% use the next higher rate in the table above. The next higher rate for 8.0 fluid ounces (0.25 lb. a.i.) must not exceed 9.6 fluid ounces (0.3 lb. a.i.) per acre.

<sup>2</sup> Controls initial and several continuing flushes (germinations) of wild poinsettia.

<sup>3</sup> Purple Nutsedge activity is based on preplant incorporated applications of this product. Pre emergence surface applications may provide control (>85%) under certain circumstances. Otherwise, purple Nutsedge will be partially controlled (71 to 84%).

In soils with pH greater than 7 use the next lower application rate. Irrigation with alkaline (pH 8 to 9) water can result in adverse crop response. The extent of crop response is dependent on the application rate, soil type (including %OM and pH), timing (after this product application relative to crop emergence), amount, and pH of irrigation water. **DO NOT** irrigate with water greater than pH 9.

After peanuts are established (4 to 6 across in size) the alkalinity of irrigation water has minimal impact on crop growth.

For information on other weeds not listed above, refer to Weeds Controlled section (Table 5) in this label.

**Precautions**

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

**Restrictions**

- The maximum single application rate for this product is 9.6 fluid ounces, the equivalent of 0.3 lbs ai/A.
- The maximum annual application rate for this product is 9.6 fluid ounces, the equivalent of 0.3 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 4.8 fluid ounces/A.
- **DO NOT** feed treated peanut forage or peanut hay to livestock.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** irrigate with water having a pH higher than 9.
- **DO NOT** apply at cracking time.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

**POTATOES**

**Table 8**

<b>Alligare Sulfentrazone 4SC Use Rate Table (Potatoes)</b> Preemergence Application	
<b>Broadcast Rate</b>	<b>Fluid Ounces Alligare Sulfentrazone 4SC per acre</b>
	<b>Soil Texture</b>

<b>% Organic Matter</b>	<b><u>Coarse</u></b>	<b><u>Medium</u></b>	<b><u>Fine</u></b>
<1.5	3.0 – 4.5	3.0 – 4.5	3.75 – 5.25
1.5 – 3.0	3.0 – 4.5	3.75 – 6.0	4.5 – 6.0
>3.0	4.5 – 6.0	5.25 – 6.75	6.0 – 8.0

Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

### **Ground and Aerial Applications**

Apply this product by aerial application as a preemergence treatment following planting and after dragoff, but prior to potato emergence. Optimum performance can be achieved if this product is applied to the soil surface and either rainfall or overhead irrigation is used to activate the product. If no moisture is received within 7 days following application in areas without irrigation, a shallow incorporation (less than 2 inches) may be needed prior to weed and potato emergence to activate the product. Select the use rate based on soil texture and organic matter as shown in Table 8 above. For control of emerged weeds at the time of the application, an appropriate burndown herbicide, and adjuvants labeled for potatoes may be tank mixed with this product to control these weeds. **DO NOT** apply this product if the potatoes have emerged from the soil as undesirable crop response may occur. This product may be tank mixed with other soil applied herbicides labeled for use in potatoes to improve weed management and increase weed control spectrum.

Apply this product in a minimum of 10 gallons of spray by ground application and 5 gallons of spray by air.

### **Chemigation Applications**

This product may be applied to potatoes through sprinkler irrigation systems including center pivot, lateral move, end tow, solid set, or hand move irrigation systems. Apply this product prior to potato emergence using sufficient water (0.25 to 0.5 inch per acre) to provide thorough soil surface coverage, but to avoid runoff of irrigation water. This product may be applied with other products labeled for chemigation use in potatoes.

It is important to note that irrigation with highly alkaline water (high pH) following a soil application may significantly increase the amount of Sulfentrazone available in soil solution. Irrigation with water having a pH greater than 7.5 could result in adverse crop response. This response will ultimately depend on initial application rate, application timing, amount, and pH of irrigation water the sensitivity of the crop and the crop growth stage when irrigated. The risk of adverse crop response will lessen with advances in the crop growth stage.

### **Weeds Controlled when applied according to Directions, Alligare Sulfentrazone 4SC will provide control of**

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

For information on other weeds not listed above, refer to Weeds Controlled section (Table 5) in this label.

### **Precautions**

Potato varieties may vary in their response to herbicide applications. When using this product on an untested variety, always determine the crop tolerance before planting. Some potato varieties including Sangre, Shepody, and Snowden have shown sensitivity to this product. Use caution when planting these varieties on marginal coarse soils.

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented

under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

**Restrictions**

- The maximum single application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.
- The maximum annual application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 4.0 fluid ounces/A.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** apply this product after potato emergence from the soil as undesirable crop response may occur.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

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**SOYBEANS**

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**Table 9**

<b>Alligare Sulfentrazone 4SC Use Rate Table (Soybeans)</b>			
Fall, Spring Early Preplant, Preemergence, and Preplant Incorporated Application			
<b>Broadcast Rate</b>	<b>Fluid Ounces Alligare Sulfentrazone 4SC per acre</b>		
	<b>Soil Texture</b>		
<b>% Organic Matter</b>	<b><u>Coarse</u></b>	<b><u>Medium</u></b>	<b><u>Fine</u></b>
<1.5	4.5 – 6.0	6.0 – 8.0	8.0
1.5 – 3.0	6.0 – 8.0	8.0 – 10.1	10.1
>3.0	8.0 – 10.1	10.1 – 12.0	12.0
Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.			

**Ground and Aerial Applications**

Apply this product in conventional tillage, conservation tillage, reduced tillage, or no tillage cropping systems using rates listed in the Use Rate Table 9. This product may be applied with ground or aerial sprayers calibrated to deliver a minimum of 10 gallons of finished spray by ground application and 5 gallons of finished spray by air. Use nozzle types and arrangements that will provide optimum coverage while producing a minimal amount of fine droplets.

Apply sufficient spray volume to achieve adequate coverage.

**Preplant Incorporated and Preemergence Applications**

This product can be applied prior to planting or up to 3 days after planting. When applications after planting are delayed greater than 3 days after planting, injury may occur if seeds are germinating. This product may be applied preemergence or preplant incorporated. For preplant incorporated applications, incorporation must be uniform and no deeper than 2 inches.

Improper soil incorporation may result in erratic weed control and/or crop injury. This product applied near or after crop emergence may cause severe injury to the crop. This product can be applied alone or in combination with other labeled soybean herbicides. This product may be followed by labeled postemergence soybean herbicides for increased control of grass and broadleaf weeds. Always follow the most restrictive label when tank mixing. When using this product in no till or minimum till cropping systems, tank mix with an appropriate burndown herbicide for improved control of existing weeds.

### Fall Applications

This product may be applied as a fall treatment to the stubble of harvested crops for the burndown of existing vegetation and preemergence control of labeled weeds the following spring in no till and conservation tillage production systems. Fall applications of this product must be made in weed control programs that include as needed spring applications of preplant preemergence or postemergence herbicides for the following year. This product can be applied to the stubble of a harvested crop in no till or to the soil surface of conservation tillage fields after harvest when the sustained soil temperature is 55 degrees F and falling at a soil depth of 4 inches. Apply after September 30 in those areas North of Interstate 90 and after October 15 in those areas North of Interstate 70. **DO NOT** apply this product as a fall treatment South of Interstate 70.

Applications to ridge till production systems must be made after the formation of ridges or bedded.

If weeds are emerged at the time of application, utilize a tank mixture with a suitable burndown herbicide at labeled rates. Apply fall applied burndown treatments with a minimum of 20 gallons per acre to achieve adequate coverage of the weeds being treated. When making burndown applications to emerged weeds, the addition of adjuvants, including COC or MSO to the spray mixture can be used to enhance the burndown activity of the application.

### Weeds Controlled

**When Applied according to directions Alligare Sulfentrazone 4SC will provide control of**

Amaranth, Palmer	Nightshade
Copperleaf, hophornbeam	Pigweed, spp.
Kochia (ALS and Triazine Resistant)	Sida, prickly
Lambsquarters, common	Thistle, Russian
Morningglory, spp.	Waterhemp, spp.

For information on other weeds not listed above, refer to Weeds Controlled section (Table 5) in this label.

### Precautions

When applying this product with other registered herbicides, refer to specific label information on precautions, instructions, limitations, application methods and timings, and weeds controlled.

This product is especially effective against a wide range of economic broadleaf and grass weeds. The same processes that Sulfentrazone affects in these weeds can, under certain conditions, be affected in soybeans. These conditions include high pH (7.5 and above), cool weather, prolonged and excessive moisture, seedling diseases, and any other condition, including poor agronomic practices, that are unfavorable to vigorous crop growth. Such effects in soybeans are often observed as stunting and discoloration. The duration of these effects are somewhat dependent on the duration of the adverse growing conditions. These effects lessen and generally diminish with the return to normal growing conditions.

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

### Restrictions

- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 6.0 fluid ounces/A.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may

occur following application.

- **DO NOT** apply after crop seed germination.

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**SUGARCANE**

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**Table 10**

<b>Alligare Sulfentrazone 4SC Use Rate Table (Sugarcane)</b> Planting Time and Lay by Applications			
<b>Broadcast Rate</b>	<b>Fluid Ounces Alligare Sulfentrazone 4SC per acre</b>		
	<b>Soil Texture</b>		
<b>% Organic Matter</b>	<b><u>Coarse</u></b>	<b><u>Medium</u></b>	<b><u>Fine</u></b>
<1.5	4.5 – 6.0	6.0 – 8.0	8.0
1.5 – 3.0	6.0 – 8.0	8.0 – 10.1	10.1
>3.0	8.0 – 10.1	10.1 – 12.0	12.0
Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.			

Apply this product as a broadcast or banded preemergence soil applied treatment for the control of broadleaf weeds grasses and sedges in sugarcane. Refer to the Product Use Rate Section and Table 10 for specific use information.

**Planting Time Applications**

Make a preemergence application of this product to newly planted or ratoon sugarcane. Use the higher rate on clay soils and/or soils with organic matter content higher than 2 percent. Apply either by air in a minimum of 5 gallons of spray per acre or by ground equipment in a minimum of 15 gallons of spray per acre. This product may be applied with other herbicides registered for use in sugarcane.

**Aerial Applications**

This product may be applied by air in a minimum of 5 gallons of finished spray per acre. This product may be applied with other herbicides or insecticides registered for aerial application in sugarcane.

**Lay by Applications**

Apply this product as a directed spray to sugarcane at lay by timing. Use the higher rate on clay soils and/or soils with organic matter content higher than 2 percent. Apply as a directed spray with ground equipment in a minimum of 15 gallons of spray per acre. This product may be applied with other herbicides registered for use in sugarcane.

**Weeds Controlled**

**When applied according to directions Alligare Sulfentrazone 4SC will provide control of**

Morningglory, entireleaf	Morningglory, tall
Morningglory, ivyleaf	Pigweed, red root
Morningglory, red	Nutsedge, yellow

For information on other weeds not listed above, refer to Weeds Controlled section (Table 5) in this label.

### Precautions

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

### Restrictions

- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 6.0 fluid ounces/A.
- Pre harvest Interval (PHI) **DO NOT** apply within 120 days of harvest.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** allow spray to contact crop leaves.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

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### SUNFLOWER SUBGROUP 20B

*Calendula, Castor oil plant, Chinese tallowtree, Euphorbia, Evening primrose, Jojoba, Niger seed, Rose hip, Safflower, Stokes aster, Sunflower, Tallowwood, Tea oil plant, Vernonia, cultivars, varieties, and/or hybrids of these.*

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Table 11

Alligare Sulfentrazone 4SC Use Rate Table (Sunflower subgroup 20B) Fall, Early Spring Preplant, Preemergence, and Preplant Incorporated Applications			
Broadcast Rate	Fluid Ounces Alligare Sulfentrazone 4SC per acre		
	Soil Texture		
% Organic Matter	Coarse	Medium	Fine
<1.5	3.0 – 3.75	3.0 – 4.5	3.75 – 5.25
1.5 – 3.0	3.0 – 4.5	3.75 – 6.0	4.5 - 6.75
>3.0	3.75 – 6.0	4.5 – 6.75	6.0 - 8.0

Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

### Fall Applications (For use only in ND, SD, MT, MN, WY, CO, NE, KS)

This product may be applied in the fall as a preplant treatment to control or suppress weeds prior to planting the following spring. Apply this product to the stubble or soil surface and allow moisture from rainfall or snow to move the product into the soil. **DO NOT** mechanically incorporate in the fall or spring as this can destroy the herbicide barrier and allowing weed escapes to occur. **DO NOT** apply to frozen soils or to existing snow cover to prevent runoff from rain or snow melt that may occur following application. This product may be tank mixed with other residual soil herbicides that are labeled for fall use on sunflowers or other crops in subgroup 20B. If weeds are emerged at the time of application, use a burndown herbicide, including glyphosate or paraquat at the full labeled rate in combination with this product or split application as needed. Select the appropriate rate from Table 11 above within the correct soil type and organic matter range. When applying this product in the fall, use a mid to high rate within the rate range for the appropriate soil type and organic matter.

### Early Preplant and Preemergence (Spring Applications)

This product may be applied preplant on the soil surface in the spring to control weeds. This product can be applied early preplant prior to planting, up to 3 days after planting as a preemergence soil application if seedlings have not broken the soil surface, and if the seed furrow is completely closed. For preemergence applications greater than 3 weeks prior to planting, use the high rate within the appropriate rate range for the soil and organic matter type listed in the use rate chart above (Table 13). If applying this product to coarse textured soils with less than 1.5% organic matter, wait a minimum of 7 days after application before planting. This product can be tank mixed with other preemergence herbicides labeled for sunflowers or other crops in subgroup 20B. If dry conditions persist following preemergence application of this product, a shallow incorporation may be needed to incorporate and activate the herbicide. If weeds are emerged at the time of this product application, use a burndown herbicide at the full labeled rate in combination with this product or split application as needed.

### Preplant Incorporated (PPI)

This product may be applied as a Preplant Incorporated treatment in the spring prior to planting in reduced and conventional tillage. Shallowly incorporate this product in the soil no deeper than 2 inches. Incorporating this product deeper than 2 inches can result in inconsistent weed control. Use the in rate from Table 11 above for the soil texture organic matter and pH level. This product can be tank mixed with other soil applied herbicides labeled for preplant incorporation in sunflowers or other crops in subgroup 20B.

### Weeds Controlled

**When applied according to directions, Alligare Sulfentrazone 4SC will provide control of**

Amaranth, Palmer	Pigweed, red root
Filaree, redstem	Pigweed, smooth
Kochia (ALS and Triazine Resistant)	Sida, Prickly
Lambsquarters, common	Thistle, Russian
Morningglory, ivyleaf	Waterhemp, common
Morningglory, tall	Waterhemp, tall
Nightshade, Eastern black	

For information on other weeds not listed above refer to Weeds Controlled section (Table 5) in this label.

### Precautions

When applying this product to coarse textured soils it is advised that growers allow a minimum of 7-14 days from application to planting. Best results are achieved with this product when applications are made early preplant and greater than 14 days before planting. Some adverse crop response may occur on coarse textured soils with low organic matter (less than 1.5%) and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings. Reduce use rates in those areas. Inadequate seed furrow closure or shallow planting (less than 1.0 inch) may result in undesirable crop response. As expected, poor growing conditions, including excessive moisture, low temperatures, soil compaction, and diseases may also cause undesirable crop response.

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

### Restrictions

- The maximum single application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.
- The maximum annual application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 4.0 fluid ounces/A.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may



occur following application.

- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** incorporate greater than 2 inches deep.

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**TOBACCO (Burley, Flue Cured and Dark)**

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**Table 12**

<b>Alligare Sulfentrazone 4SC Use Rate Table (Tobacco) Preemergence and Preplant Incorporated Applications</b>			
<b>Broadcast Rate</b>	<b>Fluid Ounces Alligare Sulfentrazone 4SC per acre</b>		
	<b>Soil Texture</b>		
<b>% Organic Matter</b>	<b><u>Coarse</u></b>	<b><u>Medium</u></b>	<b><u>Fine</u></b>
<1.5	4.5 – 6.0	6.0 – 8.0	8.0
1.5 – 3.0	6.0 – 8.0	8.0 – 10.1	10.1
>3.0	8.0 – 10.1	10.1 – 12.0	12.0
Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.			

This product may be surface applied or preplant incorporated (to a depth no greater than 2 inches) from 14 days to 12 hours days prior to transplanting tobacco. Incorporating this product deeper than 2 inches can result in inconsistent weed control.

Broadcast apply the appropriate this product rate from Table 12 above in a minimum of 10 gallons per acre of water to the soil prior to transplanting.

**Non Bedded (Fields where raised beds are NOT formed prior to transplanting)**

Perform all accepted cultural practices for land preparation, fertilizer /fungicide incorporation, etc., prior to the application of this product. Once the field has been prepared for planting, this product may be surface applied or lightly preplant incorporated from 14 days to 12 hours prior to transplanting.

If this product is surface applied and it is necessary to remove equipment tracks from the field after application, but prior to transplanting, any light finishing equipment may be used providing the soil is not disturbed to a depth greater than 2 inches.

If timely cultivations are not performed following a pre-transplant surface application, reduced/unacceptable weed control may occur in the drill.

**Bedded (Fields where raised beds ARE formed PRIOR to transplanting)**

Apply this product to formed beds as a surface application from 14 days to 12 hours prior to transplanting. If it is customary to drag/knock down beds prior to transplanting, this procedure must be performed prior to the application of this product.

When incorporating prior to bedding, this product must be thoroughly and uniformly incorporated to a depth no greater than 2 inches to avoid concentrating this product in the bed.

If initial transplanting fails to produce a uniform stand, tobacco may be replanted. **DO NOT** re-treat field with a second application of this product or any other herbicide containing Sulfentrazone. **DO NOT** re-bed. Re-transplant into previously formed treated beds. For broad spectrum and optimum grass weed control a grass herbicide application will be required.

**Weeds Controlled**

**When Applied according to directions, Alligare Sulfentrazone 4SC will provide control of**

Amaranthus, livid	Pigweed, redroot
Filaree, redstem	Pigweed, smooth

Galinsoga, hairy	Sida, prickly
Lambsquarters, common	Signalgrass, broadleaf
Morningglory, ivyleaf	Smartweed, Pennsylvania
Morningglory, tall	

For information on other weeds not listed above refer to Weeds Controlled section (Table 5) in this label.

### Precautions

Poor agronomic practices, unfavorable pH soils, diseases, cold weather, excessive moisture, drought, or other conditions, unfavorable to normal plant growth, may adversely affect the growth of tobacco transplants. Weakened transplants may be more susceptible to herbicide response and diseases, particularly under poor drainage or compacted soil conditions or when the soil has been saturated for long periods of time. Contact your State Agricultural Extension Service Specialist for consultation as to the agronomic advice suited for your tobacco varieties and local conditions. Temporary stunting of tobacco may occur if transplants are set too shallowly or if heavy rainfall occurs immediately following transplanting. Splashing of treated soil onto tobacco leaves may cause some localized and inconsequential necrosis. Use sound transplanting practices that insure treated soil will not wash or crust over tobacco plants.

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

### Restrictions

- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 6.0 fluid ounces/A.
- **DO NOT use on Shade Grown Tobacco**
- **DO NOT apply this product to soils classified as sands containing less than 1% organic matter**
- **DO NOT** use this product in tobacco seeding beds or greenhouses.
- **DO NOT** apply this product post-transplant as unacceptable injury may occur.
- **DO NOT** perform tillage practices that concentrate this product into the bed or crop injury may occur.
- **DO NOT** incorporate greater than 2 inches deep.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

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### WHEAT (SPRING), (Pacific Northwest States- ID, OR, WA only)

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Apply 6.0 fluid ounces (0.19 lbs. active ingredient) per acre of this product. Make one pre plant or pre emergence application at 40-60 days before forage cutting and 120 days before grain harvest. Apply in 10-40 gallons of water per acre. (This use is limited for areas in the Pacific Northwest only).

### Weeds Controlled

**When applied according to directions, Alligare Sulfentrazone 4SC will provide control of**

Kochia (ALS and Triazine Resistant)	<i>Kochia scoparia</i>
Thistle, Russian	<i>Salsola kali</i>

For information on other weeds not listed above refer to Weed Controlled section (Table 5) in this label.

### Restrictions

- The maximum single application rate for this product is 6 fluid ounces, the equivalent of 0.19 lbs ai/A.

- The maximum annual application rate for this product is 6 fluid ounces, the equivalent of 0.19 lbs ai/A.
- **DO NOT** apply more than 1 application of this product per year.
- **DO NOT** use on soils classified as sand which have less than 1% organic matter.
- Pre-harvest interval (PHI): 40-60 days (forage cutting), 120 days (grain harvest)
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

**VEGETABLE CROPS**

Before applying this product to vegetable crops users, producers and/or applicators must read and follow the information presented in the Conditions of Sale and Limitation of Warranty and Liability section of this label.

**ASPARAGUS**

**Table 13**

<b>Alligare Sulfentrazone 4SC Use Rate Table (Asparagus) Spring, Preemergence Applications</b>			
<b>Broadcast Rate</b>	<b>Fluid Ounces Alligare Sulfentrazone 4SC per acre</b>		
	<b>Soil Texture</b>		
<b>% Organic Matter</b>	<b><u>Coarse</u></b>	<b><u>Medium</u></b>	<b><u>Fine</u></b>
<1.5	4.5 – 6.0	6.0 – 8.0	8.0
1.5 – 3.0	6.0 – 8.0	8.0 – 10.1	10.1
>3.0	8.0 – 10.1	10.1 – 12.0	12.0
Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.			

Apply this product as a broadcast treatment to crowns established for one or more years. Apply in the spring before the crop and weeds emerge. Apply this product at the rates provided in Table 13 in 10 to 40 gallons of finished spray per acre. This product may be applied with other pesticides registered for use with asparagus.

**Weeds Controlled**

**When applied according to directions Alligare Sulfentrazone 4SC will provide control of**

Amaranth, Palmer	Nightshade, Eastern black
Galinsoga, hairy	Nutsedge, yellow
Lambsquarters, common	Pigweed, redroot
Morningglory, ivyleaf	Pigweed, smooth

For information on other weeds not listed above, refer to Weeds Controlled section (Table 5) in this label.

### Precautions

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult University or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

### Restrictions

- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 1 application of this product per year.
- **DO NOT apply within 14 days prior to harvest.**
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

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### BRASSICA, HEAD AND STEM

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

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Table 14

Alligare Sulfentrazone 4SC Use Rate Table (Head and Stem Brassica) Fall or Spring Early Preplant, Preemergence, and Preplant Incorporated Applications			
Broadcast Rate	Fluid Ounces Alligare Sulfentrazone 4SC per acre		
	Soil Texture		
% Organic Matter	<u>Coarse</u>	<u>Medium</u>	<u>Fine</u>
<1.5	2.25 – 3.0	3.0 – 4.5	3.0 – 6.0
1.5 – 3.0	3.0 – 6.0	6.0 – 9.0	6.0 – 9.0
>3.0	6.0 – 9.0	6.0 – 12.0	6.0 – 12.0

Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

### Early Preplant and Preemergence (Fall Application or Spring Application)

This product may be applied in the fall or spring preceding the growing season up to 72 hours prior to transplanting head and stem brassica. Apply this product to the harvested crop stubble or soil surface without incorporation. Moisture in the form of rain or snow will move and activate the product into the soil. **DO NOT** mechanically incorporate in the fall or spring after application as this may destroy the herbicide barrier and weed escapes can occur. **DO NOT** apply to frozen soils to prevent runoff from rain or snow that may occur following application. This product may be tank mixed with other burndown herbicides to control emerged weeds in the fall or spring or with residual soil herbicides that are labeled for use on head and stem brassica. Use the listed rates of burndown herbicides in combination with this product or split applications as needed.

### Preplant Incorporated (PPI)

This product may be applied as a preplant incorporated treatment in the spring prior to transplanting head and stem brassica. **DO NOT** incorporate to depths greater than 2 inches.

This product can be tank mixed with other burndown or soil applied herbicides labeled for use in head and stem brassica. Use the listed rates of burndown herbicides or split applications as needed.

## Weeds Controlled

When Applied according to directions, Alligare Sulfentrazone 4SC will provide control of

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

## Precautions

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

## Restrictions

- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 6.0 fluid ounces/A.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** incorporate to depths greater than 2 inches.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

**BRASSICA, LEAFY GREENS, Broccoli, Raab, Chinese (Bok choy) cabbage, Collards, Kale, Mizuna, Mustard greens, Mustard, Spinach, Rape greens**

Table 15

Alligare Sulfentrazone 4SC Use Rate Table (Leafy Brassica)			
Fall or Spring Early Preplant, Preemergence, and Preplant Incorporated Applications			
Broadcast Rate	Fluid Ounces Alligare Sulfentrazone 4SC per acre		
	Soil Texture		
% Organic Matter	<u>Coarse</u>	<u>Medium</u>	<u>Fine</u>
<1.5	2.25 – 3.0	3.0 – 4.5	3.0 – 6.0
1.5 – 3.0	3.0 – 6.0	6.0 – 6.4	6.0 – 6.4
>3.0	6.0 – 6.4	6.0 – 6.4	6.0 – 6.4

Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

## Early Preplant and Preemergence (Fall Application or Spring Application)

This product may be applied in the fall or spring preceding the growing season up to 72 hours prior to planting leafy brassica. Apply this product to the harvested crop stubble or soil surface without incorporation. Moisture in the form of rain or snow will move and activate the product into the soil. **DO NOT** mechanically incorporate in the fall or spring after application as this may destroy the herbicide barrier and weed escapes can occur. **DO NOT** apply to frozen soils to prevent runoff from rain or snow that may occur following application. This product may be tank mixed with other burndown herbicides to control emerged weeds in the fall or spring or with residual soil herbicides that are labeled for use on cabbage. Use the listed rates of burndown herbicides in combination with this product or split applications as needed.

### Preplant Incorporated (PPI)

This product may be applied as a preplant incorporated treatment in the spring prior to planting leafy brassica. **DO NOT** incorporate to depths greater than 2 inches. This product can be tank mixed with other burndown or soil applied herbicides labeled for use in leafy brassica. Use the listed rates of burndown herbicides or split applications as needed.

### Weeds Controlled

When Applied according to directions, Alligare Sulfentrazone 4SC will prove control of

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

### Precautions

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

### Restrictions

- The maximum single application rate for this product is 6.4 fluid ounces, the equivalent of 0.2 lbs ai/A.
- The maximum annual application rate for this product is 6.4 fluid ounces, the equivalent of 0.2 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 3.2 fluid ounces/A.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** incorporate to depths greater than 2 inches.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

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### CABBAGE (Transplanted Only)

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Table 16

Alligare Sulfentrazone 4SC Use Rate Table (Cabbage)			
Fall or Spring Early Preplant, Preemergence, and Preplant Incorporated Applications			
Broadcast Rate	Fluid Ounces Alligare Sulfentrazone 4SC per acre		
	Soil Texture		
% Organic Matter	<u>Coarse</u>	<u>Medium</u>	<u>Fine</u>
<1.5	2.25 – 3.0	3.0 – 4.5	3.0 – 6.0
1.5 – 3.0	3.0 – 6.0	6.0 – 9.0	6.0 – 9.0
>3.0	6.0 – 9.0	6.0 – 12.0	6.0 – 12.0

Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

### Early Preplant (Fall Application or Spring Application)

This product may be applied in the states of MN, ND, SD, MT, CO, NE, WY, ID, WA, OR, WI, or MI only in the fall or spring preceding the growing season to control weeds prior to or up to the planting or transplanting of cabbage. This product may be applied in the spring from 60 days prior to planting up to planting time. Apply this product to the harvested crop stubble or soil surface without incorporation. Moisture in the form of rain or snow will move and activate the product into the soil. **DO NOT** mechanically incorporate in the fall or spring after application as this may destroy the herbicide barrier and weed escapes can occur. **DO NOT** apply to frozen soils to prevent runoff from rain or snow that may occur following application. This product may be tank mixed with other burndown herbicides to control emerged weeds in the fall or spring or with residual soil herbicides that are labeled for fall use on cabbage. Use the listed rates of burndown herbicides in combination with this product or split applications as needed.

### Preplant Incorporated (PPI)

This product may be applied as a preplant incorporated treatment in the spring prior to transplanting of cabbage. **DO NOT** incorporate to depths greater than 2 inches. This product can be tank mixed with other burndown or soil applied herbicides labeled for use in cabbage. Use the listed rates of burndown herbicides or split applications as needed.

### Transplant Cabbage

This product may be applied pre-emergence as a broadcast or banded treatment to transplanted cabbage only. Make broadcast or banded application treatments prior to transplanting. This product may be applied as a banded treatment into the row middles within 72 hours after transplanting.

### Weeds Controlled

When Applied according to directions, Alligare Sulfentrazone 4SC will provide control of

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

For information on other weeds not listed above refer to Weeds Controlled section (Table 5) in this label.

### Precautions

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult University or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

### Restrictions

- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 6.0 fluid ounces/A.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** incorporate to depths greater than 2 inches.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

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## COWPEAS, SUCCULENT (TENNESSEE ONLY)

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Table 17

Alligare Sulfentrazone 4SC Use Rate Table (Cowpeas, Succulent (Tennessee Only)) Preemergence Applications	
Broadcast Rate	Fluid Ounces Alligare Sulfentrazone 4SC per acre

% Organic Matter	Soil Texture		
	<u>Coarse</u>	<u>Medium</u>	<u>Fine</u>
<1.5	2.25 – 3.75	3.0 – 6.0	3.75 – 6.0
1.5 – 3.0	3.0 – 4.5	3.75 – 6.0	4.5 – 6.0
>3.0	3.75 – 6.0	4.5 – 6.0	5.25 – 6.0
Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.			

### Preemergence

This product may be applied to succulent cowpeas as a preemergence treatment at the rates provided in Table 17. Make applications with ground equipment in a minimum of 10 gallons of finished spray per acre.

### Weeds Controlled

**When applied according to directions, Alligare Sulfentrazone 4SC will provide control of**

Copperleaf, hophornbeam	Pigweed, redroot
Morningglory, entireleaf	Pigweed, smooth
Morningglory, ivyleaf	

### Precautions

When applying this product to coarse textured soils it is advised that growers allow a minimum of 7-14 days from application to planting. Best results are achieved with this product when applications are made early preplant and greater than 14 days before planting.

Under extended periods of dry weather adequate weed control may not be achieved.

Some adverse crop response may occur on coarse textured soils with low organic matter (less than 1.5%) and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings. Reduce use rates in those areas. If applying this product to coarse textured soils with less than 1.5% organic matter, wait a minimum of 7 days after application before planting. Inadequate seed furrow closure or shallow planting (less than 1.0 inch) may result in undesirable crop response.

As expected poor growing conditions, including excessive moisture, low temperatures, soil compaction, and diseases may also cause undesirable crop response.

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product.

Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

### Restrictions

- The maximum single application rate for this product is 6 fluid ounces, the equivalent of 0.19 lbs ai/A.
- The maximum annual application rate for this product is 6 fluid ounces, the equivalent of 0.19 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 3.0 fluid ounces/A.
- **DO NOT apply to coarse soils classified as sand which have less than 1% organic matter.**
- **DO NOT** incorporate.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.



## 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.

Table 18

Alligare Sulfentrazone 4SC Use Rate Table (Dry Shelled Beans and Peas) Fall or Spring, Early Preplant, Preemergence, and Preplant Incorporated Applications			
Broadcast Rate	Fluid Ounces Alligare Sulfentrazone 4SC per acre		
	Soil Texture		
% Organic Matter	<u>Coarse</u>	<u>Medium</u>	<u>Fine</u>
<1.5	2.25 – 3.0	3.0 – 4.5	3.0 – 4.5
1.5 – 3.0	3.0 – 4.5	3.75 – 6.0	4.5 – 6.0
>3.0	3.75 – 6.0	4.5 – 6.75	5.25 – 8.0
Refer to the previous information on soil types under the coarse, medium, and fine categories.			
Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.			

### Early Preplant and Fall Applications (For use only in ND, SD, MT, MN, WY, CO, NE, KS, WI, MI, OR, ID, WA, OR, MT)

This product may be applied in the fall as a preplant treatment to control or suppress weeds prior to planting the following spring. Apply this product to the stubble or soil surface and allow moisture from rainfall or snow to move the product into the soil. **DO NOT** mechanically incorporate in the fall or spring as this can destroy the herbicide barrier and weed escapes can occur. **DO NOT** apply to frozen soils or to existing snow cover to prevent runoff from rain or snow melt that may occur following application. This product may be tank mixed with other residual soil herbicides that are labeled for fall use on dry bean and dry peas. If weeds are emerged at the time of application, use a burndown herbicide, including glyphosate or paraquat at the full labeled rate in combination with this product or split application as needed. Select the appropriate rate from Table 17 above within the correct soil type and organic matter range. When applying this product in the fall, use a mid to high rate within the rate range for the appropriate soil type and organic matter.

### Early Preplant and Preemergence (Spring Applications)

This product may be applied preplant on the soil surface in the spring to control weeds in dry bean and dry peas. This product can be applied early preplant prior to planting up to 3 days after planting as a preemergence soil application if seedlings have not broken the soil surface and if the seed furrow is completely closed. For preemergence applications greater than 3 weeks prior to planting, use the high rate within the appropriate rate range for the soil and organic matter type listed in the use rate chart above Table 17. If applying this product to coarse textured soils with less than 1.5% organic matter, wait a minimum of 7 days after application before planting. This product can be tank mixed with other preemergence herbicides labeled for dry bean and dry peas use. If dry conditions persist following preemergence application of this product a shallow incorporation may be needed to incorporate and activate the herbicide. If weeds are emerged at the time of application, use a burndown herbicide at the full labeled rate in combination with this product or split application as needed.

### Preplant Incorporated (PPI)

This product may be applied as a Preplant Incorporated treatment in the spring prior to planting in reduced and conventional tillage dry bean and dry pea. **DO NOT** incorporate to depths greater than 2 inches. Use rates for PPI applications are similar to those used in preplant and preemergence applications. This product can be tank mixed with other burndown or soil applied herbicides labeled for use in dry bean or dry pea. Use the listed rates of burndown herbicides or split applications as needed.

## Weeds Controlled

When applied according to directions, Alligare Sulfentrazone 4SC will provide control of

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

For information on other weeds not listed above refer to Weeds Controlled section (Table 5) in this label.

## Precautions

When applying this product to coarse textured soils it is advised that growers allow a minimum of 7-14 days from application to planting. Best results are achieved with this product when applications are made early preplant and greater than 14 days before planting. Under extended periods of dry weather adequate weed control may not be achieved.

Some adverse crop response may occur on coarse textured soils with low organic matter (less than 1.5%) and pH of 7.8 or higher or on highly eroded soils or in areas of calcareous outcroppings. Reduce use rates in those areas. Inadequate seed furrow closure or shallow planting (less than 1.0 inch) may result in undesirable crop response. As expected poor growing conditions, including excessive moisture, low temperatures, soil compaction, and diseases may also cause undesirable crop response.

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult University or extension weed management specialist for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

## Restrictions

- The maximum single application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.
- The maximum annual application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 4.0 fluid ounces/A.
- **DO NOT** apply after crop emerges or if the seedling is close to the soil surface.
- **DO NOT** incorporate to depths greater than 2 inches.
- **DO NOT** apply to frozen soils or to existing snow cover to prevent runoff from rain or snow melt that may occur following application.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**

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## FRUITING VEGETABLES (EXCEPT CUCURBITS) AND OKRA

African eggplant, bush tomato, bell pepper, cocona, currant, tomato, eggplant, garden huckleberry, goji berry, groundcherry, martynia, naranjilla, okra, pea eggplant, pepino pepper, bell pepper, non-bell, roselle, scarlet eggplant, sunberry, tomatillo, tomato, tree tomato, cultivars, varieties, and/or hybrids of these.

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Table 19

Alligare Sulfentrazone 4SC Use Rate Table (Fruiting Vegetables (Except Cucurbits) And Okra) Fall or Spring, Early Preplant, Preemergence, and Preplant Incorporated Applications	
Broadcast Rate	Fluid Ounces Alligare Sulfentrazone 4SC per acre

% Organic Matter	Soil Texture		
	Coarse	Medium	Fine
1.5	2.25 – 3.0	3.0 – 4.5	3.0 – 6.0
1.5 – 3.0	3.0 – 6.0	6.0 - 9.0	6.0 – 9.0
>3.0	6.0 – 9.0	6.0 – 12.0	6.0 – 12.0

Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

### Preplant Applications

This product may be applied preemergence as a broadcast or banded treatment on fruiting vegetables. Applications must be made prior to transplant. This product can be tank mixed with other burndown or soil applied herbicides labeled for use on tomatoes. Use the listed rates of burndown herbicides or spilt applications as needed. Observe all precautions, instructions, and rotational cropping guidelines of each products label when tank mixing including all references to potential carryover and crop injury, warnings, or restrictions.

### Preplant Incorporated (PPI)

This product may be applied as a preplant incorporated treatment in the spring prior to transplanting tomatoes. **DO NOT** incorporate to depths greater than 2 inches. This product can be tank mixed with other burndown or soil applied herbicides labeled for use on tomatoes. Use the full specified rates of burndown herbicides or spilt applications as needed.

### Weeds Controlled

**When Applied according to directions, Alligare Sulfentrazone 4SC will provide control of**

Lambsquarters, common	Pigweed, redroot
Morningglory, ivyleaf	Waterhemp, common
Nutsedge, yellow	Waterhemp, tall

**Precautions** - These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

### Restrictions

- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 6.0 fluid ounces/A.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

## HORSERADISH

Table 20

Alligare Sulfentrazone 4SC Use Rate Table (Horseradish) Fall or Spring, Early Preplant, Preemergence, and Preplant Incorporated Applications	
Broadcast Rate	Fluid Ounces Alligare Sulfentrazone 4SC per acre

% Organic Matter	Soil Texture		
	Coarse	Medium	Fine
<1.5	2.25 – 4.5	3.0 – 4.5	3.0 – 4.5
1.5 – 3.0	4.5 – 6.0	6.0 - 8.0	6.0 – 8.0
>3.0	6.0 – 7.5	6.0 – 8.0	6.0 – 8.0

Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

This product may be applied as a preplant, preemergence, or preplant incorporated treatment by ground in a minimum of 15 gallons of finished spray.

**Early Preplant (Fall Application or Spring Application) (MN, ND, SD, MT, CO, NE, WY, ID, WA, OR, WI, MI)**

This product may be applied in the fall or spring preceding the growing season to control or suppress weeds prior to or up to the planting of horseradish. This product may be applied in the spring from 60 days prior to planting up to planting. Apply this product to the harvested crop stubble or soil surface without incorporation. Moisture in the form of rain or snow will move and activate the product into the soil. **DO NOT** mechanically incorporate in the fall or spring after application as this may destroy the herbicide barrier and weed escapes may occur. **DO NOT** apply to frozen soils to prevent runoff from rain or snow that may occur following application. This product may be tank mixed with other burndown herbicides to control emerged weeds in the fall or spring or with residual soil herbicides that are labeled for use on horseradish. Use listed rates of burndown herbicides in combination with this product or split applications as needed.

**Preplant Incorporated (PPI)**

This product may be applied as a preplant incorporated treatment in the spring prior to planting of horseradish. **DO NOT** incorporate to depths greater than 2 inches. This product can be tank mixed with other burndown or soil applied herbicides labeled for use on horseradish. Use the listed rates of burndown herbicides or split applications as needed.

**Pre Emergence (PRE)**

This product may be applied pre-emergence as a broadcast or banded treatment on horseradish. Make applications broadcast prior to planting, broadcast soon after planting but at least 5 days before crop emergence. This product may be applied as a banded treatment into the row middles after crop emergence. Use the higher rates on clay soils and/or soils with greater than 1% organic matter. This product may be applied with other pesticides registered for use on horseradish.

**Weeds Controlled**

**When applied according to directions, Alligare Sulfentrazone 4SC will provide control of**

Lambsquarters, common	Pigweed, redroot
Morningglory, ivyleaf	Waterhemp, common
Nutsedge, yellow	Waterhemp, tall

For information on other weeds not listed above refer to Weeds Controlled section (Table 5) in this label.

**Precautions**

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

**Restrictions**

- The maximum single application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.

- The maximum annual application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 4.0 fluid ounces/A.
- **DO NOT** apply directly on the crop after the crop emerges or if the seedling sprouts are close to the soil surface.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** incorporate to depths greater than 2 inches.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

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**LIMA BEANS, SUCCULENT (TENNESSEE ONLY)**

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**Table 21**

<b>Alligare Sulfentrazone 4SC Use Rate Table (Lima Beans, Succulent (Tennessee Only)) Preemergence Applications</b>			
<b>Broadcast Rate</b>	<b>Fluid Ounces Alligare Sulfentrazone 4SC per acre</b>		
	<b>Soil Texture</b>		
<b>% Organic Matter</b>	<b><u>Coarse</u></b>	<b><u>Medium</u></b>	<b><u>Fine</u></b>
<1.5	2.25 – 3.75	3.0 – 6.0	3.75 – 6.0
1.5 – 3.0	3.0 – 4.5	3.75 – 6.0	4.5 – 6.0
>3.0	3.75 – 6.0	4.5 – 6.0	5.25 – 6.0
Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.			

**Preemergence**

This product may be applied to succulent lima beans as a preemergence treatment at the rates provided in Table 21. Make applications with ground equipment in a minimum of 10 gallons of finished spray per acre.

**Weeds Controlled**

**When applied according to directions, Alligare Sulfentrazone 4SC will provide control of**

Copperleaf, hophornbeam	Pigweed, redroot
Morningglory, entireleaf	Pigweed, smooth
Morningglory, ivyleaf	

**Precautions**

When applying this product to coarse textured soils it is advised that growers allow a minimum of 7-14 days from application to planting. Best results are achieved with this product when applications are made early preplant and greater than 14 days before planting.

Under extended periods of dry weather adequate weed control may not be achieved.

Some adverse crop response may occur on coarse textured soils with low organic matter (less than 1.5%) and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings. Reduce use rates in those areas inadequate seed furrow closure or shallow planting (less than 1.0 inch) may result in undesirable crop response. As expected, poor growing conditions, including excessive moisture, low temperatures, soil compaction, and diseases may also cause undesirable crop response.

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific

local varieties or cultivars and any other pertinent information on this product under specific local conditions.

**Restrictions**

- The maximum single application rate for this product is 6 fluid ounces, the equivalent of 0.19 lbs ai/A.
- The maximum annual application rate for this product is 6 fluid ounces, the equivalent of 0.19 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 3.0 fluid ounces/A.
- **DO NOT apply to coarse soils classified as sand which have less than 1% organic matter.**
- **DO NOT** incorporate.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

**MELONS**

Citron melon, muskmelon, watermelon

**Table 22**

<b>Alligare Sulfentrazone 4SC Use Rate Table (Melons)</b>			
<b>Preemergence Applications</b>			
<b>Broadcast Rate</b>	<b>Fluid Ounces Alligare Sulfentrazone 4SC per acre</b>		
	<b>Soil Texture</b>		
<b>% Organic Matter</b>	<b><u>Coarse</u></b>	<b><u>Medium</u></b>	<b><u>Fine</u></b>
<1.5	3.0 - 3.75	3.0 – 4.5	3.75 – 5.25
1.5 – 3.0	3.0 – 4.5	3.75 – 6.0	4.5 – 6.8
>3.0	3.75 – 6.0	4.5 – 6.8	6.0 – 8.0
Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.			

**Preemergence**

This product can be applied 48 hours prior to planting to any time after planting but before seedlings have emerged. This product applied after crop emergence may cause severe injury to the crop. This product can be applied alone or in combination with other labeled melon herbicides. This product may be followed by labeled postemergence melon herbicides for increased control of grass and broadleaf weeds. Always follow the most restrictive label when tank mixing. When using this product in no till or minimum till cropping systems, tank mix with an appropriate burndown herbicide for improved control of existing weeds.

**Weeds Controlled**

**When applied according to directions, Alligare Sulfentrazone 4SC will provide control of**

Lambsquarters, common	Pigweed, redroot
Morningglory, ivyleaf	Waterhemp, common
Nutsedge, yellow	Waterhemp, tall

**Precautions**

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

**Restrictions**

- The maximum single application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.
- The maximum annual application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.

- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 4.0 fluid ounces/A.
- **DO NOT** apply directly on the crop after the crop emerges or if the seedling sprouts are close to the soil surface.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

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## RHUBARB

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Apply 8 fluid ounces (0.25 lbs. active ingredient) per acre of Alligare Sulfentrazone 4SC. Make one post emergent broadcast application (just prior to rhubarb plants breaking dormancy) at 80 (+/- 5) days before harvest. Use a minimum of 10 gallons of water per acre.

### Weeds Controlled

When applied according to directions, Alligare Sulfentrazone 4SC will provide control of

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

For information on other weeds not listed above refer to Weed Controlled section (Table 5) in this label.

### Restrictions

- The maximum single application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.
- The maximum annual application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.
- **DO NOT** apply more than 1 application of this product per year.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.
- Pre-harvest interval: 80 days

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## STRAWBERRY

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Table 23

Alligare Sulfentrazone 4SC Use Rate Table (Strawberry) Preemergence Applications			
Broadcast Rate	Fluid Ounces Alligare Sulfentrazone 4SC per acre		
	Soil Texture		
% Organic Matter	<u>Coarse</u>	<u>Medium</u>	<u>Fine</u>
<1.5	2.25 – 3.0	3.0 – 4.5	3.0 – 6.0
1.5 – 3.0	3.0 – 6.0	6.0 – 9.0	6.0 – 9.0
>3.0	6.0 – 9.0	6.0 – 12.0	6.0 – 12.0

Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

### Preemergence

This product can be applied prior to planting and before seedlings have emerged. This product applied after crop emergence may cause severe injury to the crop. This product can be applied alone or in combination with other labeled strawberry herbicides. This product may be followed by labeled postemergence strawberry herbicides for increased control of grass and broadleaf weeds. Always follow the most restrictive label when tank mixing. When using this product in no till or minimum till cropping systems, tank mix with an appropriate burndown herbicide for improved control of existing weeds.

## Weeds Controlled

When applied according to directions, Alligare Sulfentrazone 4SC will provide control of

Corn, spurry	Pineapple, weed
Field, Pansy	Prostrate, knotweed
Groundsel, common	Sheperdspurse
Ladysthumb	Waterhemp, common
Lambsquarters, common	Waterhemp, tall
Mayweed	White Campion
Morningglory, ivyleaf	Wild buckwheat
Nutsedge, yellow	Pigweed, redroot
Yellow woodsorrel	

## Precautions

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

## Restrictions

- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 6.0 fluid ounces/A.
- **DO NOT** retreat sooner than 60 days after previous treatment.
- **DO NOT** apply directly on the crop after the crop emerges or if the seedling sprouts are close to the soil surface.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

## 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)

Table 24

Alligare Sulfentrazone 4SC Use Rate Table (Succulent Peas) Preemergence Applications			
Broadcast Rate	Fluid Ounces Alligare Sulfentrazone 4SC per acre		
	Soil Texture		
% Organic Matter	Coarse	Medium	Fine
<1.5	2.25 – 3.75	3.0 – 6.0	3.75 – 6.0
1.5 – 3.0	3.0 – 4.5	3.75 – 6.0	4.5 – 6.0
>3.0	3.75 – 6.0	4.5 – 6.0	5.25 – 6.0

Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.

## Preemergence

This product may be applied to succulent peas as a preemergence treatment at the rates provided in Table



24. Make applications with ground equipment in a minimum of 10 gallons of finished spray per acre.

**Weeds Controlled**

**When applied according to directions, Alligare Sulfentrazone 4SC will provide control of**

Copperleaf, hophornbeam	Pigweed, redroot
Morningglory, entireleaf	Pigweed, smooth
Morningglory, ivyleaf	

**Precautions**

When applying this product to coarse textured soils it is advised that growers allow a minimum of 7-14 days from application to planting. Best results are achieved with this product when applications are made early preplant and greater than 14 days before planting.

Under extended periods of dry weather adequate weed control may not be achieved.

Some adverse crop response may occur on coarse textured soils with low organic matter (less than 1.5%) and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings. Reduce use rates in those areas. If applying this product to coarse textured soils with less than 1.5% organic matter, wait a minimum of 7 days after application before planting. Inadequate seed furrow closure or shallow planting (less than 1.0 inch) may result in undesirable crop response. As expected, poor growing conditions, including excessive moisture, low temperatures, soil compaction, and diseases may also cause undesirable crop response.

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

**Restrictions**

- The maximum single application rate for this product is 6 fluid ounces, the equivalent of 0.19 lbs ai/A.
- The maximum annual application rate for this product is 6 fluid ounces, the equivalent of 0.19 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 3.0 fluid ounces/A.
- **DO NOT apply to coarse soils classified as sand which have less than 1% organic matter.**
- **DO NOT** incorporate.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

**TURNIPS**

Apply 0.25 lbs. active ingredient (8 fluid ounces) per acre of Sulfentrazone. Make one post emergent application at 46-60 days before harvest. Apply in 10-40 gallons of water per acre.

**Weeds Controlled**

**When applied according to directions, Alligare Sulfentrazone 4SC will provide control of**

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

For information on other weeds not listed above refer to Weed Controlled section (Table 5) in this label.

**Restrictions**

- The maximum single application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.
- The maximum annual application rate for this product is 8 fluid ounces, the equivalent of 0.25 lbs ai/A.

- **DO NOT** apply more than 1 application of this product per year.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

**OIL CROPS**

**FLAX**

**Table 25**

<b>Alligare Sulfentrazone 4SC Use Rate Table (Flax) Fall, Early Preplant and Preemergence Applications</b>			
<b>Broadcast Rate</b>	<b>Fluid Ounces Alligare Sulfentrazone 4SC per acre</b>		
	<b>Soil Texture</b>		
<b>% Organic Matter</b>	<b><u>Coarse</u></b>	<b><u>Medium</u></b>	<b><u>Fine</u></b>
<1.5	2.25 – 3.0	3.0 – 4.5	3.0 – 6.0
1.5 – 3.0	3.0 – 6.0	6.0 – 9.0	6.0 – 9.0
>3.0	6.0 – 9.0	6.0 – 12.0	6.0 – 12.0
Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.			

**Fall Applications (For use only in ND, SD, MT, MN, WY, CO, NE, KS)**

This product may be applied in the fall as a preplant treatment to control or suppress weeds prior to planting flax the following spring. Apply this product to the stubble or soil surface and allow moisture from rainfall or snow to move the product into the soil. **DO NOT** mechanically incorporate in the fall or spring as this can destroy the herbicide barrier and allow weed escapes to occur. **DO NOT** apply to frozen soils or to existing snow cover to prevent runoff from rain or snow melt that may occur following application. If weeds are emerged at the time of application, use a labeled burndown herbicide at the full labeled rate in combination with this product or a sequential application as needed. Select the in rate from the Table above within the correct soil type and organic matter range. When applying this product in the fall use a mid to high rate within the rate range for the in soil type and organic matter.

**Early Preplant and Preemergence (Spring Applications)**

This product may be applied preplant on the soil surface in the spring to control weeds in flax. This product can be applied early preplant prior to planting up to 3 days after planting as a preemergence soil application if seedlings have not broken the soil surface and if the seed furrow is completely closed. This product applied after crop emergence may cause severe injury to the crop. For preemergence applications greater than 3 weeks prior to planting, use the mid to high rate within the appropriate rate range for the soil and organic matter type listed in the use rate chart above. This product can be applied alone or in combination with other labeled flax herbicides. Always follow the most restrictive label when tank mixing. This product may be followed by labeled postemergence flax herbicides for increased control of grass and broadleaf weeds. If dry conditions persist following preemergence application of this product weed control may be poor. If weeds are emerged at the time of application, use a burndown herbicide at the full labeled rate in combination with this product or split application as needed. When using this product in no till or minimum till cropping systems, tank mix with an appropriate burndown herbicide for improved control of existing weeds.

### Preemergence

This product can be applied prior to planting to any time after planting, but before seedlings have emerged. This product applied after crop emergence may cause severe injury to the crop. This product can be applied alone or in combination with other labeled flax herbicides. This product may be followed by labeled postemergence flax herbicides for increased control of grass and broadleaf weeds. Always follow the most restrictive label when tank mixing. When using this product in no till or minimum till cropping systems, tank mix with an appropriate burndown herbicide for improved control of existing weeds.

### Weeds Controlled

**When applied according to directions, Alligare Sulfentrazone 4SC will provide control of**

Copperleaf, hophornbeam	Morningglory, tall
Kochia (ALS and Triazine Resistant)	Nightshade, Eastern black
Morningglory, entireleaf	Pigweed, redroot
Morningglory, ivyleaf	Pigweed, smooth

### Precautions

When applying this product to coarse textured soils, growers are to allow a minimum of 7-14 days from application to planting. Some adverse crop response may occur on coarse textured soils with low organic matter (less than 1.5%) and pH of 7.2 or higher or on highly eroded soils hilltops or in areas of calcareous outcroppings. Reduce use rates to 3.0 fluid ounces/A in those areas or **DO NOT** use this product in those areas. Inadequate seed furrow closure or shallow planting (less than 1.0 inch) may result in undesirable crop response. As expected, poor growing conditions, including excessive moisture, low temperatures, soil compaction, and diseases may also cause undesirable crop response.

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

### Restrictions

- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 6.0 fluid ounces/A.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** incorporate greater than 2 inches deep.
- **DO NOT** apply directly on the crop after the crop emerges or if the seedling sprouts are close to the soil surface.

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**MINT**

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**Table 26**

<b>Alligare Sulfentrazone 4SC Use Rate Table (Mint) For Dormant and New Planting Applications</b>			
<b>Broadcast Rate</b>	<b>Fluid Ounces Alligare Sulfentrazone 4SC per acre</b>		
	<b>Soil Texture</b>		
<b>% Organic Matter</b>	<b><u>Coarse</u></b>	<b><u>Medium</u></b>	<b><u>Fine</u></b>
<1.5	4.5 – 6.0	6.0 – 8.0	8.0
1.5 – 3.0	6.0 – 8.0	8.0 – 10.1	10.1
>3.0	8.0 – 10.1	10.1 – 12.0	12.0
Refer to the previous information on soil types under the coarse, medium, and fine categories. Use higher rates for soils of pH less than 7.0 and lower rates for pH greater than 7.0 within the rate range.			

**Dormant Applications**

Apply this product to established stands of dormant mint after post-harvest and/or spring land cultivation has been completed and before emergence of new mint growth.

Split applications of this product may be used for preemergence sequential control of winter annuals and summer annuals. Fall applications must be applied after post-harvest cultivation has been completed and spring application made after spring cultivation has been completed and before emergence of new mint growth.

Apply this product in tank mixtures with a registered burndown herbicide to control emerged weeds at the time of application. A surfactant is advised with these tank mixtures to improve control of the emerged weeds.

This product may also be applied in tank mixtures with other products registered for use in mint.

**New Planting Applications**

This product may be applied to new mint plantings preemergence to the weeds and mint. Reduce the rate of application approximately twenty five percent of the rate listed for established plantings for particular soil characteristics. Refer to Use Rate Table (Table 24) for the in use rate for the soil type and organic matter content. The higher rates in the range are advised for soils of pH less than 7.0.

**Weeds Controlled**

**When Applied according to directions, Alligare Sulfentrazone 4SC will provide control of**

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

For information on other weeds not listed above refer to Weeds Controlled section (Table 5) in this label.

**Precautions**

Applications made to mint that has emerged will result in severe injury to exposed plant tissue. Apply only to healthy mint fields. Applications to mint under stress from disease, pests, and cultural or environmental conditions may result in crop injury.

Moisture in the form of rainfall or overhead irrigation is required after application to activate the herbicide.

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions.

### Restrictions

- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 6.0 fluid ounces/A.
- Apply this product only to dormant mint or new mint plantings before new growth emerges.
- **DO NOT use on soils classified as sand which have less than 1% organic matter.**
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

### PERMANENT CROPS

#### WEED CONTROL INFORMATION

This product is a selective soil applied herbicide for the control of susceptible broadleaf grass and sedge weeds found in Tables 28 and 29. Adequate moisture of at least ½ inch is required within 14 days after application for optimal control. If adequate rainfall is not received in a timely fashion, irrigate with a minimum of ½ inch of water. When activating moisture is delayed, a reduced level of weed control may occur. These escaped weeds can be removed using a burndown herbicide.

Tank mix this product with a burndown herbicide and use an appropriate adjuvant when weeds are present at the time of application. Refer to the tank mix partners product label for the proper use rates by weed sizes. Use the most restrictive label limitations and precautions of the tank mix product(s).

Residual weed control may be reduced when this product is applied where heavy crop trash, including leaves and branches and/or weed residues exist. It is best to rake or blow off the leaves and trash when they fall and prior to the application of this product.

**DO NOT** apply after petal fall unless using a hooded or shielded sprayer to ensure that the spray solution will not come in contact with the crop or foliage.

#### Permanent Crop Weed List

Table 27

Common Name	Scientific Name
Amaranth, livid	<i>Amaranthus lividus</i>
Amaranth, Palmer	<i>Amaranthus palmeri</i>
Amaranth, Powell	<i>Amaranthus Powell II</i>
Amaranth, spiny	<i>Amaranthus spinosus</i>
Amaranth, spleen	<i>Amaranthus dubius</i>
Anoda, spurred	<i>Anoda cristata</i>
Barnyardgrass, common	<i>Echinochloa crus-galli</i>
Bedstraw, catchweed	<i>Galium aparine</i>
Bindweed, field	<i>Convolvulus arvensis</i>
Bluegrass, annual	<i>Poa annua</i>

<b>Common Name</b>	<b>Scientific Name</b>
Bromegrass species	<i>Bromus spp.</i>
Burclover, California	<i>Medicago polymorpha</i>
Carpetweed	<i>Mollugo verticillata</i>
Cheatgrass	<i>Bromus tectorum</i>
Cheeseweed species	<i>Malva spp.</i>
Chickweed, common	<i>Stellaria media</i>
Clover species	<i>Trifolium spp.</i>
Copperleaf, hophornbeam	<i>Acalypha ostryeafolia</i>
Copperleaf, Virginia	<i>Acalypha virginica</i>
Crabgrass, large	<i>Digitaria sanguinalis</i>
Crabgrass, smooth	<i>Digitaria ischaemum</i>
Crabgrass, Southern	<i>Digitaria ciliaris</i>
Croton, tropic	<i>Croton glandulosus</i>
Crownbeard, golden	<i>Verbesina encelioides</i>
Cupgrass, woolly	<i>Enchloa villosa</i>
Cyperus, hedgehog	<i>Cyperus compressus</i>
Daisy, American	<i>Eclipta alba</i>
Devilsclaw	<i>Proboscidea louisiana</i>
Dock, curly	<i>Rumex crispus</i>
Eclipta	<i>Eclipta prostrata</i>
Eveningprimrose, cutleaf	<i>Oenothera laciniata</i>
Fescue, Red	<i>Fetuca rubra</i>
Filaree, broadleaf	<i>Erodium botrys</i>
Filaree, redstem	<i>Erodium cicutarium</i>
Filaree, whitestem	<i>Erodium moschatum</i>
Fleabane, hairy	<i>Conyza bonariensis</i>
Flixweed	<i>Descurainia sophia</i>
Foxtail, bristly	<i>Setaria verticillata</i>
Foxtail, giant	<i>Setaria faberi</i>
Foxtail, green	<i>Setaria vindis</i>
Foxtail, yellow	<i>Setaria glauca</i>
Galinsoga, hairy	<i>Galinsoga ciliata</i>
Goosegrass	<i>Eleusine indica</i>
Goosefoot, nettleleaf	<i>Chenopodium murale</i>
Groundcheery, clammy (seedling)	<i>Physalis heterophylla</i>
Groundcheery, cutleat	<i>Physalis angulate</i>
Groundsel, common	<i>Senecio vulgaris</i>
Henbit	<i>Lamium amplexicaule</i>
Horseweed (Marestail)	<i>Conyza Canadensis</i>
Ryegrass, Italian	<i>Lolium multiflorum</i>
Jimsonweed	<i>Datura stramonium</i>

<b>Common Name</b>	<b>Scientific Name</b>
Johnsongrass	<i>Sorghum halpense</i>
Junglerice	<i>Enchinochloa colona</i>
Knotweed, common	<i>Polygonum arenastrum</i>
Kochia (ALS and Triazine Resistant)	<i>Kochia scoparia</i>
Ladysthumb	<i>Polygonum persicaria</i>
Lambsquarters, common	<i>Chenopodium album</i>
Lettuce, miners	<i>Montia perfoliata</i>
Lovegrass species	<i>Eragrostis spp.</i>
Mallow, common	<i>Malva neglecta wall r</i>
Mallow, little	<i>Malva parviflora</i>
Mayweed, Chamomile	<i>Anthemis cotula l</i>
Milkweed, honeyvine	<i>Ampelamus albidus</i>
Morningglory, entireleaf	<i>Ipomoea hederacea integriuscula</i>
Morningglory, ivyleaf	<i>Ipomoea hederacea hederacea</i>
Morningglory, palmleaf	<i>Ipomoea wrightii</i>
Morningglory, purple	<i>Ipomoea turbinata</i>
Morningglory, red	<i>Ipomoea coccinea L</i>
Morningglory, scarlet	<i>Ipomoea coccinea</i>
Morningglory, smallflower	<i>Jacquemontia tamnifolia</i>
Morningglory, tall	<i>Ipomoea purpurea</i>
Mullein, turkey	<i>Eremocarpus setigerus</i>
Mustard, Species	<i>Brassica spp.</i>
Mustard, tumble	<i>Sisymbrium altissimum</i>
Nettle, burning	<i>Urtica urens</i>
Nightshade, black	<i>Solanum nigrum</i>
Nightshade, Eastern black	<i>Solanum ptycanthum</i>
Nutsedge, purple	<i>Cyperus rotundus</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>
Orchardgrass	<i>Dactylis glomerata</i>
Panicum, fall	<i>Panicum dichotomiflorum</i>
Pigweed, prostrate	<i>Amaranthus blitoides</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Pigweed, Tumble	<i>Amaranthus albus</i>
Pineapple weed	<i>Chamomilla suaveolens</i>
Plantain, blackseed	<i>Plantago rugelii decne</i>
Plantain, narrow leaved	<i>Plantago lanceolate</i>
Poorjoe	<i>Diodia teres</i>
Porophyllum	<i>Porophyllum rederale</i>
Poinsettia, wild	<i>Euphorbia heterophylla</i>
Puncturevine	<i>Tribulus terrestris</i>

<b>Common Name</b>	<b>Scientific Name</b>
Purslane, common	<i>Portulaca oleracea</i>
Redmaids	<i>Calandrinia ciliata</i>
Redweed	<i>Melochia corchorifolia</i>
Radish, Wild	<i>Raphanus raphanistrum</i>
Rocket, London	<i>Sysymbrium ino</i>
Sandbur	<i>Cenchrus spinifer</i>
Sedge, annual	<i>Carex spp.</i>
Senna, coffee	<i>Cassia occidentalis</i>
Sheperdspurse	<i>Capsella bursa pastoris</i>
Sida, prickly	<i>Sida spinose</i>
Sida, Southern	<i>Sida acuta</i>
Signalgrass, broadleaf	<i>Brachiaria platyphylla</i>
Smartweed, PA (Seedling)	<i>Polygonum pensylvanicum</i>
Smellmellon	<i>Cucumis melo</i>
Sowthistle species	<i>Sonchus spp.</i>
Strangletop, red	<i>Leptochloa filiformis</i>
Spurge, spotted	<i>Chamaesyce maculate</i>
Starbur, bristly	<i>Acanthospermum hispidum</i>
Stinkgrass	<i>Eragrostis cilianensis</i>
Toadflax, yellow	<i>Linaria vulgaris</i>
Tassleflower, red	<i>Emilio sonchifolia</i>
Thistle, Russian	<i>Salsola kali</i>
Waterhemp, common	<i>Amaranthus rudis</i>
Waterhemp, tall	<i>Amaranthus tuberculatos</i>
Waterprimrose, winged	<i>Ludwigia decurrens</i>
Willowleaf, panicle leaf	<i>Epilobium brachycarpum</i>
Witchgrass	<i>Panicum capillare</i>

#### **ANNUAL AND PERENNIAL SEDGE CONTROL INCLUDING NUTSEdge**

This product applied at 12 fluid ounces per acre (0.375 lb ai/A) may provide control or suppression of sedges whether applied preemergence or postemergence to the sedges. Postemergence applications to sedges allow this product to be taken into the sedge through the foliage as well as soil uptake through the roots. Soil uptake is the major means of uptake by sedges. Good spray coverage is required for optimum control of sedges, especially when applying postemergence to the sedges. Use a quality nonionic surfactant (NIC) at the rate of 0.25% v/v when applying postemergence.

**When applied as directed Alligare Sulfentrazone 4SC will provide control or suppression of the following sedges**

<b>Common Name</b>	<b>Scientific Name</b>
Kyllinga, green	<i>Kyllinga brevifolia</i>
Kyllinga, false green	<i>Kyllinga gracillima</i>
Nutsedge, purple	<i>Cyperus rotundus</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>



Common Name	Scientific Name
Sedge, cylindrical	<i>Cyperus retrorsus</i>
Sedge, globe	<i>Cyperus globulosus</i>
Sedge, Surinam	<i>Cyperus surinamensis</i>
Sedge, Texas	<i>Cyperus polystachyos</i>

Optimum control of purple nutsedge may be obtained using split applications of this product. Apply 4-6 fluid ounces per acre followed by a second application to actively growing purple nutsedge. **DO NOT** exceed the maximum rate of 12 fluid ounces (0.375 lb ai/A) per year. This product symptoms on purple nutsedge will be observed as reduced nutsedge stands necrosis, chlorosis, and/or stunting. Optimum control may not be observed until the second year after the original treatment.

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## APPLES

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### Application Information

Apply this product as a uniform broadcast soil application to orchard floors or as a uniform band application directed to the base of the trunk in trees to provide preemergence control of weeds listed in the Permanent Crop Weed List (Table 27) above.

For best control, apply this product when there are no weeds present or a postemergence herbicide is tank mixed to eliminate emerged weeds.

For broadcast applications, make a single application of this product at 4 to 12 fluid ounces per acre (0.125 to 0.375 lb ai/A). **DO NOT** apply more than 12 fluid ounces (0.375 lb ai) per acre per twelve-month period. The twelve-month period is considered to begin when the initial application of Alligare Sulfentrazone 4SC is applied.

For improved weed management, this product can be applied in a tank mixture with other preemergence and postemergence burndown herbicides. Refer to tank mix partner's labels for additional restrictions, including minimum spray volumes and crops in which they are labeled. Burndown herbicides may include, but are not limited to, carfentrazone-ethyl, glyphosate, paraquat, glufosinate-ammonium, and 2,4-D. **DO NOT** tank mix with flumioxazin or with other product containing sulfentrazone.

When applied as a banded treatment (50% band or less), Alligare Sulfentrazone 4SC may be applied twice per year. **DO NOT** apply more than 12 fluid ounces product per acre (0.375 lb ai/A) on a broadcast application basis per year. Allow a minimum of 60 days between applications.

Use a minimum of 10 gallons of spray solution per acre to ensure uniform spray coverage. Nozzle selection should meet manufacturer's spray volume and pressure recommendations for preemergence and postemergence herbicide applications. The spray solution must have a pH between 5.0 to 9.0.

Only apply this product to crops that have been established for one full growing season and are in good health and vigor. Avoid contact of the spray solution on the green bark of trunks of young vines and trees by wrapping the trunk with a nonporous wrap, grow tubes, or wax containers which will keep the spray solution from coming in direct contact with the green tissue. Avoid direct or indirect spray contact with crop foliage and fruit.

Best results are obtained when the soil is moist at the time of application and the application will be followed by at least ½ inch or rainfall or sprinkler irrigation within two weeks after application. Applications should be timed to take advantage of normal rainfall patterns and cool temperatures, especially where drip or micro sprinkler irrigation is used which may not uniformly incorporate the herbicide.

### REPLANTING IN NEW OR ESTABLISHED ORCHARDS

Delay replanting at least 30 days after applications with this product when replacing trees in newly planted and established orchards. Use untreated soil replanting trees.

### Precautions

- These Crop Specific Use directions are based upon the interactive effects of this product (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously

presented under Product Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information of this product under specific local conditions. Alligare, LLC does not advise tank mixing this product with other products containing sulfentrazone or other group 14 herbicides as crop injury may occur.

### Restrictions

- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 6.0 fluid ounces/A.
- Use ground equipment only. **DO NOT** apply this product using air blast sprayers or by air. **DO NOT** apply using a mechanically pressurized handgun.
- Apply to crops that have been growing for at least one full year and are in good condition.
- Avoid direct or indirect spray contact to foliage and green bark (wrap trunk with non-porous wrap, grow tubes, or wax containers to keep spray solution off of green tissue).
- **DO NOT** apply to powdery soils or soils where wind may displace the soil, unless irrigation can be applied immediately after application.
- Follow the most restrictive label of tank mix partners including all references to potential carryover and crop injury warnings and restrictions.
- Pre-harvest interval (PHI) for apples: 14 days
- If two banded treatments are made in a year, allow a minimum of 60 days between applications; however, **DO NOT** exceed the annual maximum use rate.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

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### CITRUS FRUIT, TREE NUTS, GRAPES and BERRIES

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

Preharvest Interval 3 days

**Grapes** Wine, Raisin, Table and Juice, Amur river grape

Preharvest Interval 3 days

**Berries (Crop Group 13 07)** aronia berry, bayberry, bearberry, bilberry, blackberry (including Andean blackberry, arctic blackberry, bingleberry, black satin berry, boysenberry, brombeere, California blackberry, Chesterberry, Cherokee blackberry, Cheyenne blackberry, common blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, evergreen blackberry, Himalayaberry, hullberry, lavacaberry, loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, mora, mures, deronce, nectarberry, Northern dewberry, olallieberry, Orgeon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, Southern dewberry, tayberry, youngberry, zarzamora, and cultivars, varieties, and/or hybrids of these) blueberry, highbush blueberry, lowbush, buffalo currant, buffaloberry, che, Chilean guava, chokecherry, cloudberry, cranberry, cranberry highbush, currant black, currant red, elderberry, European barberry, gooseberry, honeysuckle, edible huckleberry, jostaberry, Juneberry (Saskatoon berry), kiwifruit fuzzy, kiwifruit hardy, lingonberry, maypop, mountain pepper berries, mulberry muntries, native currant, partridgeberry, phalsa, pincherry, raspberry black and red, riberry, salal, schisandra berry, sea buckthorn, serviceberry, wild raspberry, cultivars, varieties, and/or hybrids of these.

Preharvest interval 3 days

**Tree Nuts (Crop Group 14)** Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory Nut, Macadamia Nut (Bush Nut), Pecan, Pistachio, and Walnut (Black and English).

Preharvest Interval 3 days

**APPLICATION INFORMATION**

Apply this product as a uniform broadcast soil application to orchard and vineyard floors and to berry beds and furrows or as a uniform band application directed to the base of the trunk in trees and vines and to the base of the berry and beds in berry's to provide preemergence control of weeds in Table 28.

For best control, apply this product when there are no weeds present or a postemergence herbicide is tank mixed to eliminate emerged weeds.

For broadcast applications, make a single application of this product at 4 to 12 fluid ounces per acre (0.13 to 0.375 lb ai/A). **DO NOT** apply more than 12 fluid ounces (0.375 lb. a.i.) per acre per twelve-month period. The twelve-month period is considered to begin when the initial application of this product is applied.

For improved weed management, this product can be applied in a tank mixture with other preemergence and postemergence burndown herbicides. Refer to the tank mix partners labels for additional restrictions including minimum spray volumes and crops in which they are labeled. Burndown herbicides may include, but are not limited to, carfentrazone-ethyl, glyphosate, paraquat, glufosinate-ammonium, and 2,4-D. **DO NOT** tank mix with flumioxazin or with other products containing Sulfentrazone.

When applied as a banded treatment, (50% band or less) refer to formula in chart below for rate and volume. This product may be applied twice per year. **DO NOT** apply more than 12 fluid ounces product per acre (0.375 lb ai/A) on a broadcast application basis per year. Allow a minimum of 60 days between applications unless otherwise specified on the label or separate published Alligare, LLC specifications.

For band treatments apply the broadcast equivalent rate and volume per acre. To determine these:

$$\frac{\text{Band Width (Feet)}}{\text{Row Width (Feet)}} \times \text{Broadcast Rate Per Acre} = \text{Band Rate}$$
$$\frac{\text{Band Width (Feet)}}{\text{Row Width (Feet)}} \times \text{Broadcast Volume Per Acre} = \text{Band Volume}$$

Use a minimum of 10 gallons of spray solution per acre to ensure uniform spray coverage. Nozzle selection must meet manufacturers spray volume and pressure advice for preemergence and postemergence herbicide applications. The spray solution must have a pH between 5.0 and 9.0.

This product may only be applied to crops that have been established for one full year and are in good health and vigor. Avoid contact of the spray solution on the green bark of trunks, of young vines, and trees by wrapping the trunk with a nonporous wrap, grow tubes, or wax containers which will keep the spray solution from coming in direct contact with the green tissue. Avoid direct or indirect spray contact with crop foliage and fruit.

Use ground equipment only. **DO NOT** apply using an airblast sprayer or by air.

Best results are obtained when the soil is moist at the time of application and the application will be followed by at least ½ inch of rainfall or sprinkler irrigation within two weeks after application.

Time applications to take advantage of normal rainfall patterns and cool temperatures, especially where drip or micro sprinkler irrigation is used which may not uniformly incorporate the herbicide.

**REPLANTING IN NEW OR ESTABLISHED ORCHARDS AND VINEYARDS**

Delay replanting at least 30 days after applications of this product when replacing trees and vines in newly planted and established orchards and vineyards. Use untreated soil when replanting trees and vines.

### Precautions

These Crop Specific Use directions are based upon the interactive effects of this product (Sulfentrazone) and the primary soil and environmental factors which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled, and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with this product. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on this product under specific local conditions. Alligare, LLC does not advise tank mixing this product with other products containing Sulfentrazone or other group 14 herbicides, as crop injury may occur.

### Restrictions

- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 6.0 fluid ounces/A.
- **DO NOT** apply this product using airblast sprayers or by air. Use ground equipment only.
- Apply to crops that have been growing for at least one full year and are in good condition.
- Avoid direct or indirect spray contact to foliage and green bark (wrap trunk with non porous wrap, grow tubes, or wax containers to keep spray solution off of green tissue).
- **DO NOT** apply to powdery soils or soils where wind may displace the soil unless irrigation can be applied immediately after application.
- Follow the most restrictive label of tank mix partners including all references to potential carryover and crop injury, warnings, and restrictions.
- Pre harvest Interval (PHI) 3 days.
- If two banded treatments are made in a year, allow a minimum of 60 days between applications however, **DO NOT** exceed the annual maximum use rate.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

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### TURF GRASSES

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

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This product can be used to control broadleaf, grass and sedge weeds in established turfgrasses (seeded, sodded or sprigged). Apply to established turf grasses (good root system; uniform stand) tolerant to Alligare Sulfentrazone 4SC (see below). A healthy root system is necessary to fill in exposed edges, which are more susceptible to Alligare Sulfentrazone 4SC.

<b>Tolerant Turf Grasses</b>	
<b>Cool Season Grasses</b>	<b>Rate</b>
Bentgrass, Creeping* Bluegrass, Kentucky ( <i>Poa pratensis</i> ) Bluegrass, Rough*** ( <i>Poa trivialis</i> ) Fescue, Fine** ( <i>Festuca rubra</i> ) Fescue, Tall** ( <i>Festuca arundinacea</i> ) Ryegrass, Perennial ( <i>Lolium perenne</i> )	Apply at 4 – 8 fluid ounces (0.13-0.25 lbs. a.i.) per acre
*Apply a maximum of 4 fluid ounces (0.13 lbs a.i.) Alligare Sulfentrazone 4SC to creeping bentgrass. **An undesirable plant response can occur if applying Alligare Sulfentrazone 4SC to certain varieties of Chewings fine fescue or tall fescue.	
<b>Warm Season Grasses</b>	<b>Rate</b>
Bahiagrass*** ( <i>Paspalum notatum</i> ) Buffalograss ( <i>Buchloe dactyloides</i> ) Carpetgrass ( <i>Axonopus affinis</i> ) Centipedegrass ( <i>Eremochloa ophiuoides</i> ) Kikuyugrass ( <i>Pennisetum clandestinum</i> ) Seashore Paspalum ( <i>Paspalum vaginatum</i> ) Zoysiagrass*** ( <i>Zoysia japonica</i> ) Bermudagrass ( <i>Cynadon dactylon</i> ) Bermudagrass Hybrids ( <i>Cyn Bluegrass</i> ) St Augustinegrass*** ( <i>Stenotaphrum secundatum</i> )	Apply at 8 – 12 fluid ounces (0.25-0.375 lbs. a.i.) per acre
***St. Augustine grass and some varieties of bahaigrass, rough bluegrass or soysiagrass, particularly turfgrass that has been stress-weakened can experience temporary leaf surface discoloration (removed upon mowing) upon application of Alligare Sulfentrazone 4SC. Chemicals, certain cultural practices, disease, mechanical exposure and cultivation and weather can all be causes of stress-weakened turf.	

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

**DO NOT** apply more than 12 fluid ounces (0.375 pound active) per acre of this product per twelve-month period. The twelve-month period is considered to begin upon the initial application of this product.

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

When applied as indicated on this label, the following weeds will be controlled or suppressed with Alligare Sulfentrazone 4SC:

**Table 28**

<b>Summer Annual Weeds: Apply in early spring, prior to germination of weed seeds.</b>	
<b>Broadleaf Weeds</b>	<b>Grassy Weeds</b>
Black Medic ( <i>Medicago lupulina</i> ) Common Purslane ( <i>Portulaca oleracea</i> ) Pigweed, Redroot ( <i>Amaranthus retroflexus</i> ) Pigweed, Smooth ( <i>Amaranthus hybridus</i> )	Barnyardgrass ( <i>Echinochloa crus-galli</i> ) Crabgrass, Large ( <i>Digitana sanguinalis</i> ) Crabgrass, Smooth ( <i>Digitana ischaemum</i> ) Foxtail, Green ( <i>Setaria viridis</i> )

Prostrate Knotweed ( <i>Polygonum aviculare</i> ) Spurge ( <i>Euphorbia</i> spp.) Spurge, prostrate ( <i>Euphorbia supine</i> ) Spurge, spotted ( <i>Euphorbia maculate</i> )	Foxtail, Yellow ( <i>Setaria glauca</i> ) Goosegrass ( <i>Eleusine indica</i> )
<b>Winter Annual Weeds:</b> Apply in late summer or early fall.	
<b>Broadleaf Weeds</b>	<b>Grassy Weeds</b>
Buttercups ( <i>Ranunculus</i> spp.) Carolina geranium ( <i>Geranium carolinianum</i> ) Chickweed, common ( <i>Stellaria media</i> ) Chickweed, mouseear ( <i>Cerastium vulgatum</i> ) Common groundsel ( <i>Senecio vulgaris</i> ) Corn Speedwell ( <i>Veronica arvensis</i> ) Hairy bittercress ( <i>Cardamine hirsute</i> ) Henbit ( <i>Lamium amplexicaule</i> ) Knawel ( <i>Scleranthus annuus</i> ) Large Hop clover ( <i>Trifolium campestre</i> ) Parsley-piert ( <i>Alchemilla microcarpa</i> ) Spurweed ( <i>Soliva pterosperma</i> ) Violet, Johnny-jump-up ( <i>Viola rafinesquii</i> )	Annual bluegrass ( <i>Poa annua</i> ) Annual ryegrass ( <i>Lolium multiflorum</i> )

### Post-Emergence Weed Control

When applied as indicated on this label, the following weeds will be controlled or suppressed with Alligare Sulfentrazone 4SC:

**Table 29**

<b>Broadleaf Weeds</b>	
Bedstraw, catchweed ( <i>Galium aparine</i> )	Lambsquarters, Common ( <i>Chenopodium album</i> )
Beggarweed, Florida ( <i>Desmodium tortuosum</i> )	Lawn Burweed (Spurweed) ( <i>Soliva pterosperma</i> )
Bittercress ( <i>Cardamine</i> spp.)	Lespedeza, Common ( <i>Lespedeza striata</i> )
Black Medic ( <i>Medicago lupulina</i> )	Mallow, Common ( <i>Malva neglecta</i> )
Buttercup ( <i>Ranunculus</i> spp.)	Onion, Wild ( <i>Allium canadense</i> )
Carolina Geranium ( <i>Geranium carolinianum</i> )	Parsley-piert ( <i>Alchemilla arvensis</i> )
Carpetweed ( <i>Mollugo verticillata</i> )	Pigweed, Redroot ( <i>Amaranthus retroflexus</i> )
Chickweed, Common ( <i>Stellaria media</i> )	Pigweed, Smooth ( <i>Amaranthus hybridus</i> )
Chickweed, Mouseear ( <i>Cerastium vulgatum</i> )	Pigweed, Tumble ( <i>Amaranthus albus</i> )
Cinquefoil ( <i>Potentilla</i> spp.)	Pineapple Weed ( <i>Matricaria matricarioides</i> )
Clover ( <i>Trifolium</i> spp.)	Plantain, Buckhorn ( <i>Plantago lanceolata</i> )
Copperleaf ( <i>Acalypha</i> spp.)	Puncture Weed ( <i>Tribulus terrestris</i> )
Cudweed ( <i>Gnaphalium</i> spp.)	Purslane, Common ( <i>Portulaca oleracea</i> )
Dandelion ( <i>Taraxacum officinale</i> )	Pusley, Florida ( <i>Richardia scabra</i> )
Dock, Curly ( <i>Rumex crispus</i> )	Red weed ( <i>Melochia corchorifolia</i> )
Dollarweed ( <i>Hydrocotyle umbellata</i> )	Rocket, London ( <i>Sisymbrium irio</i> )
Eclipta ( <i>Eclipta prostrata</i> )	Shepherd's Purse ( <i>Capsella bursa pastoris</i> )
Evening Primrose ( <i>Oenothera biennis</i> )	Smartweed, Pennsylvania ( <i>Polygonum Pensylvanicum</i> )

Fiddleneck ( <i>Amsinckia</i> spp.)	Sorrel, Red ( <i>Rumex acetosella</i> )
Filaree ( <i>Erodium</i> spp.)	Speedwell ( <i>Veronica</i> spp.)
Galinsoga ( <i>Galinsoga ciliate</i> )	Spurge, Annual ( <i>Euphorbia</i> spp.)
Garlic, Wild ( <i>Allium vineale</i> )	Spurge, Prostrate ( <i>Euphorbia humistrata</i> )
Goldenrod ( <i>Solidago</i> spp.)	Spurge, Spotted ( <i>Euphorbia maculata</i> )
Ground Ivy ( <i>Glechoma hederacea</i> )	Star of Bethlehem ( <i>Ornithogalum umbellatum</i> )
Groundsel, common ( <i>Senecio vulgaris</i> )	Velvetleaf ( <i>Abutilon theophrasti</i> )
Henbit ( <i>Lamium amplexicaule</i> )	Violet, Johnny-jump-up ( <i>Viola rafinesquii</i> )
Knawel ( <i>Scleranthus annuus</i> )	Violet, Wild ( <i>Viola pratensis</i> )
Knotweed, Prostrate ( <i>Polygonum aviculare</i> )	Woodsorrel, Creeping ( <i>Oxalis corniculata</i> )
Kochia ( <i>Kochia scoparia</i> )	Woodsorrel, Yellow ( <i>Oxalis stricta</i> )
<b>Grassy Weeds</b>	
Goosegrass ( <i>Eleusine indica</i> )	
<b>Sedges</b>	
Kyllinga, False Green ( <i>Kyllinga gracillima</i> )	Sedge, Cylindrical ( <i>Cyperus retrorsus</i> )
Kyllinga, Green ( <i>Kyllinga brevifolia</i> )	Sedge, Globe ( <i>Cyperus globulosus</i> )
Nutsedge, Purple ( <i>Cyperus rotundus</i> )*	Sedge, Surinam ( <i>Cyperus surinamensis</i> )
Nutsedge, Yellow ( <i>Cyperus esculentus</i> )	Sedge, Texas ( <i>Cyperus polystachyos</i> )
<p><b>*NOTE:</b> Split applications give optimum control of purple nutsedge. When actively growing purple nutsedge is evident, apply as indicated below:</p> <p><b>Cool season grasses:</b> 2 - 4 fluid ounces (0.07-0.13 lbs. a.i.) Alligare Sulfentrazone 4SC per acre first application, followed by second application of 4 - 6 fluid ounces (0.13-0.19 lbs. a.i.) per acre (<b>DO NOT</b> exceed 8 fluid ounces total on cool season grasses).</p> <p><b>Warm season grasses:</b> 6 - 8 fluid ounces (0.19-0.25 lbs. a.i.) Alligare Sulfentrazone 4SC per acre first application, followed by second application of 4 - 6 fluid ounces (0.13-0.19 lbs. a.i.) per acre (<b>DO NOT</b> exceed 12 fluid ounces total on warm season grasses).</p> <ul style="list-style-type: none"> <li>• Observe maximum rate per acre based on turf variety, as indicated above.</li> <li>• Allow 35 days between applications.</li> </ul>	

### Application Instructions

Apply Alligare Sulfentrazone 4SC at specified rates to control or suppress indicated weeds. Optimal control is achieved with grassy weeds when Alligare Sulfentrazone 4SC is applied to grasses that are actively growing and small (pre tiller stage). Application rates lower than 12 fluid ounces/acre will control grasses for 60 days.

Optimal 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 Alligare Sulfentrazone 4SC applications. Best results are obtained from waited at least 1 month after Alligare Sulfentrazone 4SC application before sprigging, overseeding or reseeded. If slight plant response can be tolerated, overseeding of Bermudagrass with perennial ryegrass can be done between 2-4weeks after Alligare Sulfentrazone 4SC application.

Observing proper fertilization, irrigation and soil cultivating practices, and using mechanical or power seeding equipment will give optimum overseeding or reseeded 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 Alligare Sulfentrazone 4SC for both pre-emergence control. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Applying Alligare Sulfentrazone 4SC with adjuvants or surfactants can cause short-term discoloration of some turf species and is therefore not recommended for use with adjuvants or surfactants unless the adjuvant/surfactant has been proven to be safe to use with sulfentrazone.

### **Turfgrass Use Precaution**

- Use of Alligare Sulfentrazone 4SC mixed with or applied within 7 days of herbicides containing the active ingredient trinexapac-ethyl can result in temporary turfgrass discoloration. Applying Alligare Sulfentrazone 4SC and trinexapac-ethyl herbicides 7 or more days apart decreases possibility of discoloration.

### **Turfgrass Use Restrictions**

- Establish sod production areas for three (3) months before applying Alligare Sulfentrazone 4SC.
- Pre-harvest interval is 3 months.
- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 6.0 fluid ounces/A.
- **DO NOT** apply this product to turf grasses not listed on this label.
- **DO NOT** apply with surfactants.
- **DO NOT** graze or feed forage harvested from this product treated areas.
- **DO NOT** apply to ornamental beds or landscape ornamental plants.
- **DO NOT** apply to tees or putting greens on golf courses.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.



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**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**

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This product will control susceptible weeds, maintain bare ground and complete vegetation control, and provide residual control of germinating weeds in non-cropland areas. When applied as indicated on this label, the following weeds will be controlled with this product:

<b>Weeds Controlled</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Beggarweed, Florida	<i>Desmodium tortuosum</i>
Carpeweed	<i>Mollugo verticillata</i>
Chickweed, common	<i>Stellaria media</i>
Copperleaf, hophornbeam	<i>Acalypha ostryifolia</i>
Crabgrass species	<i>Digitaria spp.</i>
Croton, tropic	<i>Croton glandulosus</i>
Daisy, American	<i>Coreopsis grandiflora</i>
Dayflower, common	<i>Commelina communis</i>
Dayflower, Virginia	<i>Commelina virginica</i>
Dock, curly	<i>Rumex crispus</i>
Fixweed	<i>Descurainia Sophia</i>
Galinsoga, hairy	<i>Galinsoga cillata</i>
Groundcherry, clammy (seedling)	<i>Physallis heterophylla</i>
Groundcherry, cutleaf	<i>Physallis angulata</i>
Jimsonweed	<i>Datura stramonium</i>
Kochia (ALS and Triazene Resistant Kochia)	<i>Kochia scoparia</i>
Lambsquarters, common	<i>Chenopodium album</i>
Lettuce, wild	<i>Lactuca virosa</i>
Mallow, common	<i>Malva neglecta</i>
Milkweed, honeyvine	<i>Ampelamus albidus</i>
Mexicanweed	<i>Caperonia castanifolia</i>
Morningglory species	<i>Ipomoea spp.</i>
Mustard species	<i>Brassica spp.</i>
Nightshade species	<i>Solanum spp.</i>
Nutsedge species	<i>Cyperus spp.</i>
Palmer amaranth	<i>Amaranthus palmeri</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Texasweed	<i>Caperonia palustris</i>
Thistle, Russian	<i>Salsola iberica</i>
Waterhemp, tall	<i>Amaranthus tuberculatus</i>
Waterhemp, common	<i>Amaranthus rudis</i>

See **Weeds List** (Table 5) 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 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 fluid ounces/acre (0.25-0.375 lbs. ai/acre).

Use higher rates within the specified rate range:

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

**Restrictions**

- **DO NOT** use on coarse soils classified as sand which have less than 1% organic matter.
- Applications by helicopter can only be made to railroad rights-of-way.
- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.

**Tank Mixes**

Tank mix this product 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 and disposal. **DO NOT** use or store around the home.

**Pesticide Storage:** Store in original containers only. Keep container closed when not in use. **DO NOT** store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with sand, earth, or synthetic absorbent. Remove to chemical waste area.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

### Container Handling:

**[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  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.]

**[NONREFILLABLE CONTAINER (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  $\frac{1}{4}$  full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.]

**[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 from this container into application equipment or mix tank. Fill the container about 10 percent 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. Return to point of sale. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

REFILL ONLY WITH Alligare Sulfentrazone 4SC. The contents of RETURNABLE CONTAINERS cannot be completely removed by cleaning. Refilling with materials other than Alligare Sulfentrazone 4SC will result in contamination and may weaken container.

After filling and before transporting, check for leaks. **DO NOT** refill or transport damaged or leaking container.]

## CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

To the extent consistent with applicable law, upon purchase or use of this product, purchaser and user agree to the following terms:

**Warranty:** Alligare, LLC (the Company) warrants that this product conforms to the chemical description on the label in all material respects and is reasonably fit for the purpose referred to in the directions for use, subject to the exceptions noted below, which are beyond the Company's control. To the extent consistent with applicable law, the Company makes no other representation or warranty, express or implied, concerning the product, including no implied warranty of merchantability or fitness for a particular purpose.

To the extent consistent with applicable law, no such warranty shall be implied by law, and no agent or representative is authorized to make any such warranty on the Company's behalf.

**Terms of Sale:** The Company's directions for use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, and the manner of use or application (including failure to adhere to label directions), all of which are beyond the Company's control. To the extent consistent with applicable law, all such risks are assumed by the user.

**Limitation of Liability:** To the extent consistent with applicable law, the exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damages, and in no event shall damages or any other recovery of any kind exceed the price of the product which caused the alleged loss, damage, injury or other claim. To the extent consistent with applicable law, under no circumstances shall the Company be liable for any special, indirect, incidental or consequential damages of any kind, including loss of profits or income. Some states do not allow the exclusion or limitation of incidental or consequential damages.

The Company and the seller offer this product, and the purchaser and user accept this product, subject to the foregoing warranty, terms of sale and limitation of liability, which may be varied or modified only by an agreement in writing signed on behalf of the Company by an authorized representative.

[SOLANO™] [PASSAGE™] is a trademark of ADAMA Group Company.

[EPA APPROVAL DATE]

**[Sublabel B: Turf & Non-crop uses]**

*[Note to reviewer: [Text] in brackets denotes optional text].*

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

**{{BOOKLET FRONT PANEL LANGUAGE}}**

SULFENTRAZONE	GROUP	<b>14</b>	HERBICIDE
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## Alligare Sulfentrazone 4SC

**[Alternate Brand Names: SOLANO™ Herbicide, PASSAGE™ Herbicide]**

[Turfgrasses and Non-crop uses]

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

<b>ACTIVE INGREDIENT:</b>	<b>By Wt.</b>
Sulfentrazone.....	39.6%
<b>OTHER INGREDIENTS:</b> .....	<b>60.4%</b>
<b>TOTAL:</b> .....	<b>100.0%</b>

Contains 4 pounds of active ingredient per gallon

**KEEP OUT OF REACH OF CHILDREN**

### CAUTION

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

FIRST AID	
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li><b>DO NOT</b> induce vomiting unless told to do so by a poison center or doctor.</li> <li><b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.	

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

**EPA Reg. No. 81927-86**

**EPA Est. No.:**

**Manufactured for:**

Alligare, LLC  
1565 5th Avenue  
Opelika, AL 36801

**Net Contents:**

## {LANGUAGE INSIDE BOOKLET}

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

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

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators, mixers, loaders, and other pesticide handlers must wear:

- long sleeved shirt and long pants;
- waterproof gloves; and
- shoes plus socks.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. **DO NOT** reuse 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:

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

#### PHYSICAL OR CHEMICAL HAZARDS

**DO NOT** mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur. **DO NOT** use or store near heat or open flame.

# DIRECTIONS FOR USE

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

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

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

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. These 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, including plants, soil, or water is:

- coveralls over long-sleeved shirt and long pants,
- waterproof gloves
- 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.

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

## WEED RESISTANCE MANAGEMENT

For resistance management, Alligare Sulfentrazone 4SC is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to Alligare Sulfentrazone 4SC 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.

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.

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

- Rotate the use of Alligare Sulfentrazone 4SC 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 with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage ( or other

mechanical control methods), cultural ( e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.

- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact your Alligare, LLC retailer or representative.

Report any incidence of non-performance of this product against a particular weed species to your Alligare, LLC retailer or 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.

Contact your local sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to these MOAs have been found in your region. **DO NOT** assume that each listed weed is being controlled by multiple mechanisms of action. Co-formulated active ingredients are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredient in this product.

### PRODUCT INFORMATION

Alligare Sulfentrazone 4SC is a selective, soil-applied herbicide for the control of specific grasses, sedges, and broadleaf weeds. Sulfentrazone, the active ingredient in this product, inhibits a plant enzyme that is required for producing chlorophyll. Disabling this enzyme causes the release of singlet oxygen (O) which disrupts cellular membranes, causing cell leakage and cell death, which ultimately results in weed death.

**Proper handling instructions: DO NOT** mix or load this product within [50 feet] [(100 feet [in California])] of any wells (including abandoned wells and drainage wells) sinkholes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pads or properly diked mixing/loading areas.



Operations that involve mixing, loading, rinsing or washing of this product into or from pesticide handling or application equipment or containers within [50 feet] [(100 feet [in California])] of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad which means the pad must be self contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specific minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

**DO NOT** apply this product through any type of irrigation system. **DO NOT** use flood irrigation to apply or incorporate this product.

This product must be used in a manner that will prevent back siphoning in wells, spills or improper disposal of excess pesticide spray mixtures or rinsates.

### APPLICATION INSTRUCTIONS

Make broadcast applications of this product at specified rates in early spring, late summer, or fall for optimal results. Apply in adequate water to provide thorough coverage to make at least 10 gallons finished spray per acre. Use water as the carrier if this product is applied alone or in a tank-mix.

Apply this product using boom and nozzle sprayers or boomless application systems. Make application at spray pressure of  $\leq 25$  psi, unless otherwise specified by the manufacturer. Use appropriate and calibrated nozzles, spray, tips, and screens for minimum amounts of fine spray droplets, and optimal delivery and coverage.

Applications to railroad rights-of-way can be made by helicopter. **DO NOT** allow spray to drift to adjacent plants or plant injury can occur.

When activated, this product will provide control of listed weeds. The level of control depends on the weed size and type. Dry weather without rain or irrigation will reduce the effect of this product on germinating weed species. **DO NOT** apply this product in drought conditions or when rainfall/irrigation is not available.

Weed seedling and germinating weeds absorb this product through the soil. The amount of this product available in the soil will depend on the soil type, soil pH, and amount of organic matter in the soil.

#### Aerial Application Instructions

Apply this product with appropriate nozzles that provide optimal coverage and minimize drift and keep fine droplets to a minimum. Apply this product in a volume that is appropriate to provide sufficient coverage. Use a minimum spray volume of 5 gallons per acre. **DO NOT** apply this product when wind speed is likely to cause the product to drift outside the target area.

#### Ground Application Instructions

Apply this product with a boom and nozzle spray that contains the appropriate spray tips, screens, and nozzles. Calibrate application equipment for optimal coverage and spray distribution at the appropriate pressure. Use spray nozzles designed to minimize drift and keep fine spray droplets to a minimum. Apply this product in a minimum spray volume of 10 gallons per acre. Overlapping treatment areas can injure crops. When starting, turning or stopping, slower ground speed of the application equipment can lead to crop injury. **DO NOT** apply this product when wind speed is likely to cause the product to drift outside the target area.

**[Note to reviewer: the following California-specific restrictions language may or may not appear on final labeling for product(s) registered outside of California]**

#### **[CALIFORNIA SPECIFIC RESTRICTIONS**

**Runoff Groundwater Protection Areas: DO NOT** apply Alligare Sulfentrazone 4SC in areas defined by the California Department of Pesticide Regulation as being “runoff groundwater protection areas\*” unless one of the following management practices can be met:

- 1) **Pesticide incorporation:** 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 when 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 to wells on the treated property; or
- 2) **Retention of runoff on field:** For 6 months post-application, the field shall be designed to retain all irrigation runoff and all precipitation on, and drainage through the field by berms, levees, or non-draining circulation systems. The retention area on the field shall not have a percolation rate of more than 0.2"/hour (5"/24 hours); or
- 3) **Retention of runoff in a holding area off the field:** For 6 months post-application, all runoff shall be channeled to a holding area off of 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"/hour (5"/24 hours); or
- 4) **Runoff onto a fallow field:** For 6 months post-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 6 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 this product 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 6 months or more before the basin is used to recharge ground water.

#### **Unlined Canals and Ditches**

**DO NOT** use this product below the high water lined 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 inches per hour (0.002 gallons per minute per square foot), or (b) the pesticide is applied 6 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 6 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 complied 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 designed by the California Department of Pesticide Regulation as leaching ground water protection areas\* unless either:

- 1) The user does not apply any irrigation water for 6 months following the application of this product; or

- 2) 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 6 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
- 3) 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 6 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 [www.cdpr.ca.gov/docs/emon/grndwtr/gwp.regs.htm](http://www.cdpr.ca.gov/docs/emon/grndwtr/gwp.regs.htm).]

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

When applied in combination with a liquid fertilizer, this product will control listed weeds. See local advice for fertilizers best suited to your area (i.e., urea or UAN solutions).

#### **Use Direction for Mixing Alligare Sulfentrazone 4SC with Herbicides or Liquid Fertilizer Combination**

Prior to combining the liquid fertilizer/herbicide with this product in the application tank, carry out a 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 indicated incompatibility. Though signs of incompatibility will typically be seen within 5 minutes of mixing, mixing should be observed for approximately 30 minutes. Combine this product and the carrier liquid fertilizer/herbicide as follows:

1. Fill a clean spray tank  $\frac{1}{4}$  full of fertilizer solutions.
2. Begin agitation of the fertilizer solution.
3. Use a clean container to create a slurry of this product 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 Alligare Sulfentrazone 4SC/water slurry must be mixed thoroughly prior to application.

\*For best mixing of Alligare Sulfentrazone 4SC/water slurry, add the slurry using induction systems on the spray fill plumbing system.

Read and following the label of each tank mix product used for precautionary statements, directions for use, rates, timings, and other restrictions.

#### **Application with Liquid Fertilizer**

Alligare Sulfentrazone 4SC may be applied using liquid fertilizer solutions as the carrier. The fertilizer solutions may either be concentrate formulations as blended or diluted with water. When applied as directed with adequate soil coverage, this product applied with liquid fertilizer mixtures will provide satisfactory weed control. However, adequate soil coverage is essential to achieve acceptable levels of weed control.

Herbicide mixing, solution stability, and/or compatibility problems can occur when liquid fertilizers are used as a carrier. Compatibility tests must be conducted prior to mixing to insure tank mixture compatibility and stability. The use of compatibility agents may be beneficial to achieve and maintain a homogenous solution.

#### **Mixing Instructions for Liquid Fertilizer Applications**

Fill the clean spray tank to one half of the total volume with the fertilizer solution. Start the spray tank agitation system. Prepare a slurry of this product in a clean container with clean water using equal volumes of this product and clean water. Slowly add the Alligare Sulfentrazone 4SC/water slurry to the spray tank. Carefully rinse the slurry container adding the rinsate to the spray tank. Better mixing of the Alligare Sulfentrazone 4SC/water slurry may be achieved if the slurry is added using induction systems on the sprayer fill plumbing system.

Complete filling the spray tank to the desired level. Sufficient and continuous spray tank agitation is required at all times to maintain a homogenous spray solution. The spray system must be designed such that there is sufficient flow capacity to uniformly apply the spray mixture and maintain adequate tank agitation. Some systems may require separate pumps to simultaneously supply the spray system and the spray tank agitation system. Insure the Alligare Sulfentrazone 4SC slurry is thoroughly mixed before application.

For tank mixtures with other herbicides, a compatibility test must be conducted to insure product compatibility before mixing. Read and follow all the directions, precautions, and restrictions of the tank mixture products prior to mixing.

Apply the Alligare Sulfentrazone 4SC spray mixture immediately after mixing. **DO NOT** store the sprayer overnight or for any extended period of time with the Alligare Sulfentrazone 4SC spray mixture remaining in the tank.

**DO NOT** premix this product's spray solutions in nurse tanks.

Follow all label directions regarding product use rates per acre, registered crops application instructions, incorporation directions, special instructions and all precautions.

All individual state regulations relating to liquid fertilizer blending, storage, transportation, registration, labeling, and application are the responsibility of the individual and/or company preparing selling or applying the Alligare Sulfentrazone 4SC and fertilizer mixture.

### **TANK MIXING RESTRICTIONS**

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Read and follow the applicable instructions 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.

### **SPRAYER EQUIPMENT CLEAN-OUT**

As soon as possible after spraying this product and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned to avoid potential crop affects using the following procedure. Residues left in mixing equipment, spray tanks, hoses, spray booms, and nozzles can cause crop effects if they are not properly cleaned. In addition, users must take steps to ensure proper equipment clean out for any other products mixed with this product as required on the other product labels. More complete cleaning can be achieved if the spray system is cleaned immediately following the application.

1. Drain sprayer tank, hoses, spray boom, and spray nozzles. Use a high pressure detergent wash to remove physical sediment and residues from the inside of the sprayer tank and thoroughly rinse. Then thoroughly flush sprayer hoses, spray boom, and spray nozzles with a clean water rinse. Remove and clean spray tips and all filters and screens (tank, spray hose, and spray tips) separately in the ammonia solution of Step 2.
2. Next prepare a sprayer cleaning solution by adding three gallons of ammonia (containing at least 3% active) per 100 gallons of clean water. Prepare sufficient cleaning solution to allow the operation of the spray system for a minimum of 15 minutes to thoroughly flush hoses, spray boom, and spray nozzles.
3. Convenient and thorough cleaning of the sprayer can be achieved if the ammonia solution or fresh water is left in the spray tank, hoses, spray booms, and spray nozzles overnight or during storage.
4. Before using the sprayer, completely drain the sprayer system. Rinse the tank with clean water and flush through the hoses, spray boom, and spray nozzles with clean water. Remove and clean spray tips and all filters and screens (tank, spray hose, and spray tip) separately in an ammonia solution.
5. Properly dispose of all cleaning solution and rinsate in accordance with Federal, State, and local regulations and guidelines.

**DO NOT** apply sprayer cleaning solutions or rinsate to sensitive crops.

**DO NOT** store the sprayer overnight or for any extended period of time with spray solution of this product remaining in the tank, spray lines, spray boom, plumbing, spray nozzles, or strainers.

If the sprayer has been stored or idle, purge the spray boom and nozzles with clean water before beginning any application.

Should small quantities of this product remain in inadequately cleaned mixing, loading, and/or spray equipment, they may be released during subsequent applications potentially causing effects to certain crops and other vegetation. Alligare, LLC accepts no liability for any effects due to inadequately cleaned equipment.

**DO NOT** drain or flush equipment on or near desirable trees or plants.

**DO NOT** contaminate any body of water including irrigation water that may be used on other crops.

### **SPRAY DRIFT**

- 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.
- Applicators may spray only when wind speed is between 3 and 10 mph.
- **DO NOT** apply as spray droplets smaller than medium to coarse (defined by the ASABE standard).

#### Ground Applications:

- Ground applicators must use a minimum finished spray volume of 10 gallons per acre.
- For boom spraying on agricultural sites, the maximum release height must be 30 inches from the soil.
- For boom spray applications to non-crop sites, making applications at the lowest height that produces a uniform spray pattern will reduce exposure of droplets to evaporation and wind.
- When sulfentrazone is tank mixed with a contact burndown herbicide, ground applicators must use a minimum spray volume of 15 gallons per acre.

#### Aerial Applications:

- Aerial application is allowed only when environmental conditions prohibit ground application.
- 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.
- When this product is allowed to be applied by air, applicator must use a minimum finished spray volume of 5 gallons per acre.

### **SPRAY DRIFT REDUCTION ADVISORY**

#### **AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR AND THE GROWER**

The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when in making decisions. 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  $\frac{3}{4}$  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.
4. Applications must observe and abide by the requirements of the Aerial Drift Reduction Advisory.

#### **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 recommended 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  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application Height** - Aerial applications should not be made at a height greater than 10 feet above the top of the target plant canopy unless a greater height is required for aircraft safety. In 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.

**Sensitive Areas** - The pesticide should only be applied when the wind is blowing away from sensitive areas (e.g. residential areas, bodies of water, known habitats for threatened or endangered species, non-target crops.)

### Off Target Movement of Alligare Sulfentrazone 4SC

Drift of dilute spray mixtures containing this product must be prevented. Observation of the preceding environmental conditions, correct application equipment design, calibration and application practices will significantly diminish the risk of off target spray drift. This product can cause significant symptomology by drift on to sensitive crops and other plants. This symptomology may manifest initially as discreet, localized spots where contacted by this product drift mixtures. Depending on concentration of the spray solution and droplets size (effectively determining the dosage of Sulfentrazone) and also depending on the inherent sensitivity of the plants involved, these spots or lesions may or may not coalesce. These effects will usually not have lasting effects on plant growth, but will likely reduce the value of affected fruit or foliage where grade or quality is associated with appearance. In severe drift instances with particularly sensitive crops, defoliation of affected foliage could result. Failure to follow these guidelines and environmental prohibitions that then result in off-target movement or drift of this product on to unintended crops or plants, irrespective of severity, constitutes misapplication of this product Alligare, LLC accepts no responsibility or liability for potential crop effects that may result from such misapplication of this product.

### WEEDS LIST

This product applied alone or in listed tank mixtures will provide control of the following weeds. Refer to the specific turf grasses and non-crop uses sections for additional weeds controlled.

Table 1

Common Name	Scientific Name
Amaranth, livid	<i>Amaranthus lividus</i>
Amaranth, Palmer	<i>Amaranthus palmeri</i>
Amaranth, Powell	<i>Amaranthus Powell II</i>
Amaranth, spiny	<i>Amaranthus spinosus</i>
Amaranth, spleen	<i>Amaranthus dubius</i>
Anoda, spurred	<i>Anoda cristata</i>
Bedstraw, catchweed	<i>Galium aparine</i>
Carpetweed	<i>Mollugo verticillata</i>
Chickweed, common	<i>Stellaria media</i>
Copperleaf, hophornbeam	<i>Acalypha ostryeafolia</i>
Copperleaf, Virginia	<i>Acalypha virginica</i>
Crabgrass, large	<i>Digitaria sanguinalis</i>
Crabgrass, smooth	<i>Digitaria ischaemum</i>
Crabgrass, Southern	<i>Digitaria ciliaris</i>
Croton, tropic	<i>Croton glandulosus</i>
Crownbeard, golden	<i>Verbesia encelioides</i>
Cupgrass, woolly	<i>Eriochloa villosa</i>
Cyperus, hedgehog	<i>Cyperus compressus</i>
Daisy, American	<i>Eclipta alba</i>
Devilsclaw	<i>Proboscidea louisiana</i>
Dock, curly	<i>Rumex crispus</i>
Eclipta	<i>Eclipta prostrata</i>
Filaree, redstem	<i>Erodium cicutarium</i>
Flixweed	<i>Descurainia sophia</i>
Galinsoga, hairy	<i>Galinsoga ciliata</i>
Goosegrass	<i>Eleusine indica</i>
Groundcherry, clammy (seedling)	<i>Physalis heterophylla</i>
Groundcherry, cutleaf	<i>Physalis angulata</i>
Jimsonweed	<i>Datura stramonium</i>
Kochia (ALS and Triazine Resistant)	<i>Kochia scoparia</i>
Ladysthumb	<i>Polygonum persicaria</i>
Lambsquarters, common	<i>Chenopodium album</i>
Lettuce, miners	<i>Montia perfoliata</i>

<b>Common Name</b>	<b>Scientific Name</b>
Mallow, common	<i>Malva neglecta wall r.</i>
Mayweed, Chamomile	<i>Anthemis cotula l</i>
Milkweed, honeyvine	<i>Ampelamus albidus</i>
Morningglory, entireleaf	<i>Ipomoea hederacea integriuscula</i>
Morningglory, ivyleaf	<i>Ipomoea hederacea hederacea</i>
Morningglory, palmleaf	<i>Ipomoea wrightii</i>
Morningglory, purple	<i>Ipomoea turbinata</i>
Morningglory, red	<i>Ipomoea coccinea L.</i>
Morningglory, scarlet	<i>Ipomoea coccinea</i>
Morningglory, smallflower	<i>Jacquemontia tamnifolia</i>
Morningglory, tall	<i>Ipomoea purpurea</i>
Mustard, tumble	<i>Sisymbrium allissimum</i>
Nightshade, black	<i>Solanum nigrum</i>
Nightshade, Eastern black	<i>Solanum ptycanthum</i>
Nutsedge, purple	<i>Cyperus rotundus</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>
Orchardgrass	<i>Dactylis glomerata</i>
Panicum, fall	<i>Panicum dichotomiflorum</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Plantain, blackseed	<i>Plantago rugelii decne</i>
Plantain, narrow leaved	<i>Plantago lanceolata</i>
Poorjoe	<i>Diodia teres</i>
Porophyllum	<i>Porophyllum rederale</i>
Poinsettia, wild	<i>Euphorbia heterophylla</i>
Purslane, common	<i>Poitulaca oleracea</i>
Redmaids	<i>Calandrinia ciliata</i>
Redweed	<i>Melochia corchorifolia</i>
Sedge, annual	<i>Carex spp.</i>
Senna, coffee	<i>Cassia occidentalis</i>
Sheperdspurse	<i>Capsella bursa pastoris</i>
Sida, prickly	<i>Sida spinosa</i>
Sida, Southern	<i>Sida acuta</i>
Signalgrass, broadleaf	<i>Brachiana platyphylla</i>
Smartweed, PA (seedling)	<i>Polygonum pensylvanicum</i>
Smellmellon	<i>Cucumis melo</i>
Starbur, bristly	<i>Acanthospermum hispidum</i>
Stinkgrass	<i>Eragrostis cilianensis</i>
Toadflax, yellow	<i>Linana vulgaris</i>
Tassleflower, red	<i>Emilio sonchifolia</i>
Thistle, Russian	<i>Salsola kali</i>
Waterhemp, common	<i>Amaranthus rudis</i>
Waterhemp, tall	<i>Amaranthus tuberculatos</i>
Waterprimrose, winged	<i>Ludwigia decurrens</i>
Witchgrass	<i>Panicum capillare</i>



## TURF GRASSES

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

This product can be used to control broadleaf, grass and sedge weeds in established turfgrasses (seeded, sodded or sprigged). Apply to established turf grasses (good root system; uniform stand) tolerant to Alligare Sulfentrazone 4SC (see below). A healthy root system is necessary to fill in exposed edges, which are more susceptible to Alligare Sulfentrazone 4SC.

<b>Tolerant Turf Grasses</b>	
<b>Cool Season Grasses</b>	<b>Rate</b>
Bentgrass, Creeping* Bluegrass, Kentucky ( <i>Poa pratensis</i> ) Bluegrass, Rough*** ( <i>Poa trivialis</i> ) Fescue, Fine** ( <i>Festuca rubra</i> ) Fescue, Tall** ( <i>Festuca arundinacea</i> ) Ryegrass, Perennial ( <i>Lolium perenne</i> )	Apply at 4 – 8 fluid ounces (0.13-0.25 lbs. a.i.) per acre
*Apply a maximum of 4 fluid ounces (0.13 lbs a.i.) Alligare Sulfentrazone 4SC to creeping bentgrass. **An undesirable plant response can occur if applying Alligare Sulfentrazone 4SC to certain varieties of Chewings fine fescue or tall fescue.	
<b>Warm Season Grasses</b>	<b>Rate</b>
Bahiagrass*** ( <i>Paspalum notatum</i> ) Buffalograss ( <i>Buchloe dactyloides</i> ) Carpetgrass ( <i>Axonopus affinis</i> ) Centipedegrass ( <i>Eremochloa ophiuoides</i> ) Kikuyugrass ( <i>Pennisetum clandestinum</i> ) Seashore Paspalum ( <i>Paspalum vaginatum</i> ) Zoysiagrass*** ( <i>Zoysia japonica</i> ) Bermudagrass ( <i>Cynadon dactylon</i> ) Bermudagrass Hybrids ( <i>Cyn Bluegrass</i> ) St Augustinegrass*** ( <i>Stenotaphrum secundatum</i> )	Apply at 8 – 12 fluid ounces (0.25-0.375 lbs. a.i.) per acre
***St. Augustine grass and some varieties of bahaigrass, rough bluegrass or soysiagrass, particularly turfgrass that has been stress-weakened can experience temporary leaf surface discoloration (removed upon mowing) upon application of Alligare Sulfentrazone 4SC. Chemicals, certain cultural practices, disease, mechanical exposure and cultivation and weather can all be causes of stress-weakened turf.	

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

**DO NOT** apply more than 12 fluid ounces (0.375 pound active) per acre of this product per twelve-month period. The twelve-month period is considered to begin upon the initial application of this product.

### Pre-Emergence Weed Control

When applied as indicated on this label, the following weeds will be controlled or suppressed with Alligare Sulfentrazone 4SC:

**Table 2**

<b>Summer Annual Weeds:</b> Apply in early spring, prior to germination of weed seeds.	
<b>Broadleaf Weeds</b>	<b>Grassy Weeds</b>
Black Medic ( <i>Medicago lupulina</i> ) Common Purslane ( <i>Portulaca oleracea</i> ) Pigweed, Redroot ( <i>Amaranthus retroflexus</i> ) Pigweed, Smooth ( <i>Amaranthus hybridus</i> ) Prostrate Knotweed ( <i>Polygonum aviculare</i> ) Spurge ( <i>Euphorbia</i> spp.) Spurge, prostrate ( <i>Euphorbia supine</i> ) Spurge, spotted ( <i>Euphorbia maculate</i> )	Barnyardgrass ( <i>Echinochloa crus-galli</i> ) Crabgrass, Large ( <i>Digitana sanguinalis</i> ) Crabgrass, Smooth ( <i>Digitana ischaemum</i> ) Foxtail, Green ( <i>Setaria viridis</i> ) Foxtail, Yellow ( <i>Setaria glauca</i> ) Goosegrass ( <i>Eleusine indica</i> )
<b>Winter Annual Weeds:</b> Apply in late summer or early fall.	
<b>Broadleaf Weeds</b>	<b>Grassy Weeds</b>
Buttercups ( <i>Ranunculus</i> spp.) Carolina geranium ( <i>Geranium carolinianum</i> ) Chickweed, common ( <i>Stellaria media</i> ) Chickweed, mouseear ( <i>Cerastium vulgatum</i> ) Common groundsel ( <i>Senecio vulgaris</i> ) Corn Speedwell ( <i>Veronica arvensis</i> ) Hairy bittercress ( <i>Cardamine hirsute</i> ) Henbit ( <i>Lamium amplexicaule</i> ) Knawel ( <i>Scleranthus annuus</i> ) Large Hop clover ( <i>Trifolium campestre</i> ) Parsley-piert ( <i>Alchemilla microcarpa</i> ) Spurweed ( <i>Soliva pterosperma</i> ) Violet, Johnny-jump-up ( <i>Viola rafinesquii</i> )	Annual bluegrass ( <i>Poa annua</i> ) Annual ryegrass ( <i>Lolium multiflorum</i> )

### Post-Emergence Weed Control

When applied as indicated on this label, the following weeds will be controlled or suppressed with Alligare Sulfentrazone 4SC:

**Table 3**

<b>Broadleaf Weeds</b>	
Bedstraw, catchweed ( <i>Galium aparine</i> )	Lambsquarters, Common ( <i>Chenopodium album</i> )
Beggarweed, Florida ( <i>Desmodium tortuosum</i> )	Lawn Burweed (Spurweed) ( <i>Soliva pterosperma</i> )
Bittercress ( <i>Cardamine</i> spp.)	Lespedeza, Common ( <i>Lespedeza striata</i> )
Black Medic ( <i>Medicago lupulina</i> )	Mallow, Common ( <i>Malva neglecta</i> )
Buttercup ( <i>Ranunculus</i> spp.)	Onion, Wild ( <i>Allium canadense</i> )
Carolina Geranium ( <i>Geranium carolinianum</i> )	Parsley-piert ( <i>Alchemilla arvensis</i> )
Carpetweed ( <i>Mollugo verticillata</i> )	Pigweed, Redroot ( <i>Amaranthus retroflexus</i> )
Chickweed, Common ( <i>Stellaria media</i> )	Pigweed, Smooth ( <i>Amaranthus hybridus</i> )
Chickweed, Mouseear ( <i>Cerastium vulgatum</i> )	Pigweed, Tumble ( <i>Amaranthus albus</i> )
Cinquefoil ( <i>Potentilla</i> spp.)	Pineapple Weed ( <i>Matricaria matricarioides</i> )

Clover ( <i>Trifolium</i> spp.)	Plantain, Buckhorn ( <i>Plantago lanceolata</i> )
Copperleaf ( <i>Acalypha</i> spp.)	Puncture Weed ( <i>Tribulus terrestris</i> )
Cudweed ( <i>Gnaphalium</i> spp.)	Purslane, Common ( <i>Portulaca oleracea</i> )
Dandelion ( <i>Taraxacum officinale</i> )	Pusley, Florida ( <i>Richardia scabra</i> )
Dock, Curly ( <i>Rumex crispus</i> )	Red weed ( <i>Melochia corchorifolia</i> )
Dollarweed ( <i>Hydrocotyle umbellata</i> )	Rocket, London ( <i>Sisymbrium irio</i> )
Eclipta ( <i>Eclipta prostrata</i> )	Shepherd's Purse ( <i>Capsella bursa pastoris</i> )
Evening Primrose ( <i>Oenothera biennis</i> )	Smartweed, Pennsylvania ( <i>Polygonum Pensylvanicum</i> )
Fiddleneck ( <i>Amsinckia</i> spp.)	Sorrel, Red ( <i>Rumex acetosella</i> )
Filaree ( <i>Erodium</i> spp.)	Speedwell ( <i>Veronica</i> spp.)
Galinsoga ( <i>Galinsoga ciliate</i> )	Spurge, Annual ( <i>Euphorbia</i> spp.)
Garlic, Wild ( <i>Allium vineale</i> )	Spurge, Prostrate ( <i>Euphorbia humistrata</i> )
Goldenrod ( <i>Solidago</i> spp.)	Spurge, Spotted ( <i>Euphorbia maculata</i> )
Ground Ivy ( <i>Glechoma hederacea</i> )	Star of Bethlehem ( <i>Ornithogalum umbellatum</i> )
Groundsel, common ( <i>Senecio vulgaris</i> )	Velvetleaf ( <i>Abutilon theophrasti</i> )
Henbit ( <i>Lamium amplexicaule</i> )	Violet, Johnny-jump-up ( <i>Viola rafinesquii</i> )
Knawel ( <i>Scleranthus annuus</i> )	Violet, Wild ( <i>Viola pratensis</i> )
Knotweed, Prostrate ( <i>Polygonum aviculare</i> )	Woodsorrel, Creeping ( <i>Oxalis corniculata</i> )
Kochia ( <i>Kochia scoparia</i> )	Woodsorrel, Yellow ( <i>Oxalis stricta</i> )
<b>Grassy Weeds</b>	
Goosegrass ( <i>Eleusine indica</i> )	
<b>Sedges</b>	
Kyllinga, False Green ( <i>Kyllinga gracillima</i> )	Sedge, Cylindrical ( <i>Cyperus retrorsus</i> )
Kyllinga, Green ( <i>Kyllinga brevifolia</i> )	Sedge, Globe ( <i>Cyperus globulosus</i> )
Nutsedge, Purple ( <i>Cyperus rotundus</i> )*	Sedge, Surinam ( <i>Cyperus surinamensis</i> )
Nutsedge, Yellow ( <i>Cyperus esculentus</i> )	Sedge, Texas ( <i>Cyperus polystachyos</i> )
<p><b>*NOTE:</b> Split applications give optimum control of purple nutsedge. When actively growing purple nutsedge is evident, apply as indicated below:</p> <p><b>Cool season grasses:</b> 2 - 4 fluid ounces (0.07-0.13 lbs. a.i.) Alligare Sulfentrazone 4SC per acre first application, followed by second application of 4 - 6 fluid ounces (0.13-0.19 lbs. a.i.) per acre (<b>DO NOT</b> exceed 8 fluid ounces total on cool season grasses).</p> <p><b>Warm season grasses:</b> 6 - 8 fluid ounces (0.19-0.25 lbs. a.i.) Alligare Sulfentrazone 4SC per acre first application, followed by second application of 4 - 6 fluid ounces (0.13-0.19 lbs. a.i.) per acre (<b>DO NOT</b> exceed 12 fluid ounces total on warm season grasses).</p> <ul style="list-style-type: none"> <li>• Observe maximum rate per acre based on turf variety, as indicated above.</li> <li>• Allow 35 days between applications.</li> </ul>	

### Application Instructions

Apply Alligare Sulfentrazone 4SC at specified rates to control or suppress indicated weeds. Optimal control is achieved with grassy weeds when Alligare Sulfentrazone 4SC is applied to grasses that are actively growing and small (pre tiller stage). Application rates lower than 12 fluid ounces/acre will control grasses for 60 days.

Optimal 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 Alligare Sulfentrazone 4SC applications. Best results are obtained from waited at least 1 month after Alligare Sulfentrazone 4SC application before sprigging, overseeding or reseeding. If slight plant response can be tolerated, overseeding of Bermudagrass with perennial ryegrass can be done between 2-4weeks after Alligare Sulfentrazone 4SC 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 Alligare Sulfentrazone 4SC for both pre-emergence control. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Applying Alligare Sulfentrazone 4SC with adjuvants or surfactants can cause short-term discoloration of some turf species and is therefore not recommended for use with adjuvants or surfactants unless the adjuvant/surfactant has been proven to be safe to use with sulfentrazone.

### Turfgrass Use Precautions

- Use of Alligare Sulfentrazone 4SC mixed with or applied within 7 days of herbicides containing the active ingredient trinexapac-ethyl can result in temporary turfgrass discoloration. Applying Alligare Sulfentrazone 4SC and trinexapac-ethyl herbicides 7 or more days apart decreases possibility of discoloration.

### Turfgrass Use Restrictions

- Establish sod production areas for three (3) months before applying Alligare Sulfentrazone 4SC.
- Pre-harvest interval is 3 months.
- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- **DO NOT** apply more than 2 applications of this product per year when using reduced application rate equal to or less than 6.0 fluid ounces/A.
- **DO NOT** apply this product to turf grasses not listed on this label.
- **DO NOT** apply with surfactants.
- **DO NOT** graze or feed forage harvested from this product treated areas.
- **DO NOT** apply to ornamental beds or landscape ornamental plants.
- **DO NOT** apply to tees or putting greens on golf courses.
- **DO NOT** apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

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### 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**

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This product will control susceptible weeds, maintain bare ground and complete vegetation control, and provide residual control of germinating weeds in non-cropland areas. When applied as indicated on this label, the following weeds will be controlled with this product:

Weeds Controlled	
Common Name	Scientific Name
Beggarweed, Florida	<i>Desmodium tortuosum</i>
Carpetweed	<i>Mollugo verticillata</i>

Weeds Controlled	
Common Name	Scientific Name
Chickweed, common	<i>Stellaria media</i>
Copperleaf, hophornbeam	<i>Acalypha ostryifolia</i>
Crabgrass species	<i>Digitaria spp.</i>
Croton, tropic	<i>Croton glandulosus</i>
Daisy, American	<i>Coreopsis grandiflora</i>
Dayflower, common	<i>Commelina communis</i>
Dayflower, Virginia	<i>Commelina virginica</i>
Dock, curly	<i>Rumex crispus</i>
Fixweed	<i>Descurainia Sophia</i>
Galinsoga, hairy	<i>Galinsoga cillata</i>
Groundcherry, clammy (seedling)	<i>Physallis heterophylla</i>
Groundcherry, cutleaf	<i>Physallis angulata</i>
Jimsonweed	<i>Datura stramonium</i>
Kochia (ALS and Triazene Resistant Kochia)	<i>Kochia scoparia</i>
Lambsquarters, common	<i>Chenopodium album</i>
Lettuce, wild	<i>Lactuca virosa</i>
Mallow, common	<i>Malva neglecta</i>
Milkweed, honeyvine	<i>Ampelamus albidus</i>
Mexicanweed	<i>Caperonia castanifolia</i>
Morningglory species	<i>Ipomoea spp.</i>
Mustard species	<i>Brassica spp.</i>
Nightshade species	<i>Solanum spp.</i>
Nutsedge species	<i>Cyperus spp.</i>
Palmer amaranth	<i>Amaranthus palmeri</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Texasweed	<i>Caperonia palustris</i>
Thistle, Russian	<i>Salsola iberica</i>
Waterhemp, tall	<i>Amaranthus tuberculatus</i>
Waterhemp, common	<i>Amaranthus rudis</i>

See **Weeds List** (Table 1) 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 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 fluid ounces/acre (0.25-0.375 lbs. ai/acre).

Use higher rates within the specified rate range:

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

#### Restrictions

- **DO NOT** use on coarse soils classified as sand which have less than 1% organic matter.
- Applications by helicopter can only be made to railroad rights-of-way.
- The maximum single application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.
- The maximum annual application rate for this product is 12 fluid ounces, the equivalent of 0.375 lbs ai/A.

#### Tank Mixes

Tank mix this product 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 and disposal. **DO NOT** use or store around the home.

**Pesticide Storage** - Store in original containers only. Keep container closed when not in use. **DO NOT** store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with sand, earth, or synthetic absorbent. Remove to chemical waste area.

**Pesticide Disposal** - Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

#### Container Handling

**[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 or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.]

**[NONREFILLABLE CONTAINER (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 or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.]

**[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 from this container into application equipment or mix tank. Fill the container about 10 percent 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. Return to point of sale. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities,

REFILL ONLY WITH Alligare Sulfentrazone 4SC. The contents of RETURNABLE CONTAINERS cannot be completely removed by cleaning. Refilling with materials other than Alligare Sulfentrazone 4SC will result in contamination and may weaken container.

After filling and before transporting, check for leaks. **DO NOT** refill or transport damaged or leaking container.]

#### **CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

To the extent consistent with applicable law, upon purchase or use of this product, purchaser and user agree to the following terms:

**Warranty:** Alligare, LLC (the Company) warrants that this product conforms to the chemical description on the label in all material respects and is reasonably fit for the purpose referred to in the directions for use, subject to the exceptions noted below, which are beyond the Company's control. To the extent consistent with applicable law, the Company makes no other representation or warranty, express or implied, concerning the product, including no implied warranty of merchantability or fitness for a particular purpose. To the extent consistent with applicable law, no such warranty shall be implied by law, and no agent or representative is authorized to make any such warranty on the Company's behalf.

**Terms of Sale:** The Company's directions for use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, and the manner of use or application (including failure to adhere to label directions), all of which are beyond the Company's control. To the extent consistent with applicable law, all such risks are assumed by the user.

**Limitation of Liability:** To the extent consistent with applicable law, the exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damages, and in no event shall damages or any other recovery of any kind exceed the price of the product which caused the alleged loss, damage, injury or other claim. To the extent consistent with applicable law, under no circumstances shall the Company be liable for any special, indirect, incidental or consequential damages of any kind, including loss of profits or income. Some states do not allow the exclusion or limitation of incidental or consequential damages.

The Company and the seller offer this product, and the purchaser and user accept this product, subject to the foregoing warranty, terms of sale and limitation of liability, which may be varied or modified only by an agreement in writing signed on behalf of the Company by an authorized representative.

[SOLANO™] [PASSAGE™] is a trademark of ADAMA Group Company.

[EPA APPROVAL DATE]

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

SULFENTRAZONE	GROUP	14	HERBICIDE
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**Alligare Sulfentrazone 4SC**

*[Alternate Brand Names: SOLANO™ Herbicide, PASSAGE™ Herbicide]*

<b>ACTIVE INGREDIENT:</b>	<b>By Wt.</b>
Sulfentrazone .....	39.6%
<b>OTHER INGREDIENTS:</b> .....	60.4%
<b>TOTAL:</b> .....	100.0%

Contains 4 pounds of active ingredient per gallon

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

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

FIRST AID	
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison center or doctor.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p><b>HOTLINE NUMBER</b></p> <p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.</p>	

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

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

**STORAGE AND DISPOSAL**

**DO NOT** contaminate water, food, or feed by storage and disposal. **DO NOT** use or store around the home.

**Pesticide Storage:** Store in original containers only. Keep container closed when not in use. **DO NOT** store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with sand, earth, or synthetic absorbent. Remove to chemical waste area.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for

guidance.

**Container Handling:**

**[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 or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.]

**[NONREFILLABLE CONTAINER (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 or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.]

**[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 from this container into application equipment or mix tank. Fill the container about 10 percent 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. Return to point of sale. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities, **REFILL ONLY WITH Alligare Sulfentrazone 4SC.** The contents of **RETURNABLE CONTAINERS** cannot be completely removed by cleaning. Refilling with materials other than Alligare Sulfentrazone 4SC will result in contamination and may weaken container. After filling and before transporting, check for leaks. **DO NOT** refill or transport damaged or leaking container.]

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

EPA Reg. No. 81927-86

EPA Est. No.:

**Manufactured for:**

Alligare, LLC  
1565 5th Avenue  
Opelika, AL 36801

[Batch No.]

**Net Contents:**