

EPA Reg. Number:

Date of Issuance:

81927-43

4-14-10

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Office of Pesticide Programs Registration Division (7505P) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460

U.S. ENVIRONMENTAL PROTECTION AGENCY

Term of Issuance: Unconditional

Name of Pesticide Product:

Alligare Chlorsulfuron 75

NOTICE OF PESTICIDE:

X Registration Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Alligare, LLC 13 N. 8<sup>th</sup> Street Opelika, AL 36801

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA provided you agree in writing to:

1. On page 3, change "general information" to "product information".

Signature of Approving Official:

Date:

4-14-10

James Tompkins, Product Manager (25)

Herbicide Branch, Registration Division (7505P)

EPA Form 8570-6

A stamped copy of the label is enclosed for your records. You must submit one copy of the final printed label before you release the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA. Your release for shipment of the product constitutes acceptance of these conditions. If you have any questions please contact Erik Kraft at 703-308-9358 or kraft.erik@epa.gov.

# **Alligare Chlorsulfuron 75**

# **Dry Flowable Herbicide**

ACTIVE INGREDIENT:	By Weight
Chlorsulfuron: 2-Chloro-N-[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)aminocarbonyl]	, ,
benzenesulfonamide	75.0%
OTHER INGREDIENTS:	
TOTAL:	100.0%

# KEEP OUT OF REACH OF CHILDREN CAUTION

	FIRST AID
If swallowed:	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
If in eyes:	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
	HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time or your poison control center at 1-800-222-1222.

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

#### PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical-resistance category selection chart.

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride
- · Shoes plus socks

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. 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.

EPA Reg. No. 81927-xx

EPA Est. No.

Manufactured for:

Alligare, LLC 13 N. 8<sup>th</sup> Street Opelika, AL 36801 ACCEPTED with COMMENTS In EPA Letter Dated:

Net Weightingicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

71927-43

#### **ENGINEERING CONTROL STATEMENTS**

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

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "Applicators and other handlers" and have such PPE immediately available for use in an emergency such as a spill or equipment break-down.

#### **USER SAFETY RECOMMENDATIONS**

Users should: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

#### **ENVIRONMENTAL HAZARDS**

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

#### **PESTICIDE HANDLING**

- Calibrate sprayers only with clean water away from the well site.
- Make scheduled checks of spray equipment.
- Assure accurate measurement of pesticides by all operation employees.
- Mix only enough product for the job at hand.
- · Avoid over-filling of spray tank.
- Do not discharge excess material on the soil at a single spot in the field/grove or mixing/loading station.
- Dilute and agitate excess solution and apply at labeled rates/uses.
- Avoid storage of pesticides near well sites.
- When triple rinsing the pesticide container, be sure to add the rinsate to the spray mix.

#### **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.

Only use Alligare Chlorsulfuron 75 in accordance with directions on this label or in separately published Alligare, LLC supplemental labeling.

Alligare, LLC will not be responsible for losses or damages resulting from the use of this product in any manner not specifically approved by Alligare, LLC.

Do not apply this product through any type of irrigation system.

#### 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 intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

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

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- 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.

Use on noncrop sites is not within the scope of the Worker Protection Standard.

Do not enter or allow entry into treated areas until sprays have dried.

#### **GENERAL INFORMATION**

Alligare Chlorsulfuron 75 contains the active ingredient chlorsulfuron which is a herbicide used for control of many broadleaf weeds found in pastures, ranges, Conservation Reserve Program (CRP) lands, and non-crop industrial sites (including industrial (unimproved) turf and for growth suppression and seedhead inhibition of established desirable grasses). Some non-crop industrial sites include airports, fence rows, government and private lands, military installations, petroleum tank farms, pipeline and utility rights-of-way, plant sites, pumping installations, railroads, roadsides and associated rights-of-way, and storage areas.

Some of these sites may contain temporary pools of surface water as a result of site management. Alligare Chlorsulfuron 75 may be used to treat intermittent drainage, intermittently flooded low lying sites, seasonally dry flood plains and transitional areas between upland and lowland sites when no water is present. In addition, Alligare Chlorsulfuron 75 may be applied to bogs, marshes, and swamps after water has receded and to seasonally dry flood deltas. DO NOT make applications to natural or man-made bodies of water such as canals, lakes, ponds, reservoirs, and streams.

Both preemergent and postemergent applications of Alligare Chlorsulfuron 75 will control weeds although several factors (including use rate, weed growth stage at the time of application, and post-application weather conditions) will affect the range of weeds controlled and the length of residual activity. *Annual weeds* are best controlled from application of Alligare Chlorsulfuron 75 in the early stages of weed development. *Perennial weeds* are best controlled from application of Alligare Chlorsulfuron 75 when weeds are in the bud to bloom or fall rosette stage.

#### **ENVIRONMENTAL CONDITIONS AND ACTIVATION OF ALLIGARE CHLORSULFURON 75**

Alligare Chlorsulfuron 75 moves into plants by absorption through the roots and foliage and rapidly inhibits the growth of susceptible weeds. Within two to three weeks after application, the weed growth slows and the new growth changes to a red-purple color. By four to six weeks after application, discoloration of the leaf veins and leaves is apparent, and growing points subsequently die.

For optimum control of target weeds, Alligare Chlorsulfuron 75 needs to reach the weed roots. Rainfall or irrigation after an application moves the Alligare Chlorsulfuron 75 into the soil and the weed root zone. Under cold, dry conditions movement of Alligare Chlorsulfuron 75 into the root zone will be delayed. Alligare Chlorsulfuron 75 is less effective to weeds hardened off by cold weather or under stress from lack of water.

Under most normal conditions, Alligare Chlorsulfuron 75 will not harm labeled desirable grasses. Injury may result from application of Alligare Chlorsulfuron 75 to grasses that are growing under stress (due to extreme temperatures or moisture, abnormal soil conditions, or cultural practices) or to certain sensitive species of grass.

#### RESISTANCE MANAGEMENT

Any weed population may contain or develop plants naturally resistant to herbicides with the same mode of action. The resistant biotypes may dominate the weed population if herbicides with the same mode of action are used repeatedly in the same field, and adequate control of these resistant weeds cannot be expected. Should an application not control the target weeds, retreat the area using an herbicide with a different mode of action.

To delay herbicide resistance, follow resistance management strategies such as:

- Rotation of Alligare Chlorsulfuron 75 with herbicides having different modes of action to treat the same weeds.
- Application of tank mixes of herbicides with different modes of action, when such use is permitted.
- Use of herbicides as part of an IPM program.
- Prevention of resistant weed seed movement to other fields by cleaning harvesting and tillage equipment, and planting clean seed.

Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension specialist for specific alternative cultural practices or herbicide alternatives available in your area.

## INTEGRATED PEST MANAGEMENT

Alligare Chlorsulfuron 75 may be used as part of an Integrated Pest Management (IPM) program. This program relies on tillage (or other mechanical), biological, cultural, and chemical control practices to prevent economic pest damage. IPM principles and practices include field monitoring, historical information related to herbicide use and crop rotation, correct identification of target pests, population monitoring, and treatment when target pest populations reach a locally-determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine the action treatment threshold levels for treating specific pest/crop systems in your area.

#### **IMPORTANT PRECAUTIONS AND RESTRICTIONS**

Read the following restrictions and precautions to avoid injury to or loss of desirable trees or other desirable plants or vegetation.

- To avoid severe injury or death, do not drain or flush equipment rinses on or near desirable trees or other plants, on areas where their roots may extend, or in areas where the product may be washed or moved into contact with desirable plant roots.
- To minimize off-site movement of product on treated soils which can lead to damage of susceptible crops, do not apply if soils are powdery, dry or light, or sandy and if rainfall is not expected soon after treatment. Treated soil particles may move off-site to non-target crop sites through wind or water. Low levels of Alligare Chlorsulfuron 75 may injure or kill most crops (except small grains), especially when crops are irrigated.
- The following conditions should be avoided during application to prevent runoff and movement of Alligare Chlorsulfuron 75 residues: periods of intense rainfall, soils already saturated with water, asphalt or concrete paved surfaces, frozen soils or soils through which rain water will not readily penetrate. Do not disturb treated soils to minimize the potential for Alligare Chlorsulfuron 75 movement by soil erosion from wind or water.
- Before using Alligare Chlorsulfuron 75, consult your state experimental station, university, or extension agent as to sensitivity of grass species or varieties to various herbicides. If the sensitivity of grass species or varieties is unknown, test Alligare Chlorsulfuron 75 on a small area of the grass

- species. Tolerance to Alligare Chlorsulfuron 75 of components in a grass seed mixture will vary and the final stand may not reflect the seed ratio.
- To avoid injury, do not apply Alligare Chlorsulfuron 75 to grasses growing under conditions of stress (severe weather conditions, drought, low fertility, water-saturated soils, disease, or insect damage). Injury to grasses is also possible if grasses are under stress before or after an application of Alligare Chlorsulfuron 75. Other weather conditions (such as heavy rainfall, high pH, prolonged cold weather, or wide fluctuations in day/night temperatures, drought, low fertility, water-saturated soils, disease, or insect damage) in effect before or after Alligare Chlorsulfuron 75 applications may result in temporary discolorations and/or grass injury.
- Pasture, range or CRP sites which are undersown with legumes may result in injury to the legumes after application of Alligare Chlorsulfuron 75 to these sites. Legumes in a seeding mixture may be severely injured or killed following an application of Alligare Chlorsulfuron 75.
- Do not use this product on lawns, walks, driveways, tennis courts, or similar areas.
- Do not apply this product in or on irrigation or drainage ditches or canals including their outer banks.
- Do not allow Alligare Chlorsulfuron 75 to drift or move into irrigation or drainage ditches.
- Do not apply though any type of irrigation system.
- Do not use this product in the following counties of Colorado: Saguache, Rio Grande, Alamosa, Costilla, and Conejos.

There are no hay harvest restrictions or grazing restrictions for livestock (including lactating animals) when Alligare Chlorsulfuron 75 is applied at rates up to 1 1/3 ounces per Acre.

#### INSTRUCTIONS FOR MIXING

- 1. Using clean fresh water, fill the spray tank 1/4 to 1/3 full.
- 2. Begin agitation and then add the required amount of Alligare Chlorsulfuron 75.
- 3. Allow the solution to agitate for 5 minutes to completely disperse the dry flowable Alligare Chlorsulfuron 75 formulation.
- 4. Continue agitation and fill the spray tank with the remaining water. Do not add any other material until the Alligare Chlorsulfuron 75 is thoroughly mixed with the water.
- 5. As the tank is filling with the remaining water, add any tank mix partners followed by the necessary volume of spray adjuvants. Always add the spray adjuvants last.
- 6. NOTE: Continuous agitation is required or settling will occur. Before spraying, reagitate the solution to ensure a uniform solution is sprayed.
- 7. Make only a sufficient amount of Alligare Chlorsulfuron 75 spray mixture that can be used within 24 hours of mixing. The product may degrade if allowed to sit unused.
- 8. For application of multiple loads of Alligare Chlorsulfuron 75 and a tank mix partner, make a pre-slurry of Alligare Chlorsulfuron 75 in clean water and then add to the spray tank. This pre-mix helps to prevent the tank mix partner from interfering with the dissolution of the Alligare Chlorsulfuron 75.

Do not mix Alligare Chlorsulfuron 75 with spray additives that reduce the pH of the spray solution below 5.0. Additional information is found in the section, Spray Adjuvants

#### **HOW TO CLEAN SPRAYER EQUIPMENT**

Clean all spray equipment before making an application of Alligare Chlorsulfuron 75.

Immediately after an application or multiple applications of Alligare Chlorsulfuron 75, clean all spray equipment using the cleanup procedures described on the labels of previously applied products. If there are no cleanup directions, use the following cleanup procedures.

**Note:** The directions for sprayer cleanup presented below is only effective for Alligare Chlorsulfuron 75 and for general uses specified under "Directions for Use". Do not use the sprayer equipment on food crops (except wheat, barley and oats), feed crops (except range land, CRP and pasture), fine turf, ornamentals, and other desirable plants.

After spraying is completed at the end of the day, rinse the interior of the tank with fresh water. Partially refill the tank with fresh water and flush the boom and hoses. These rinses will prevent deposits of dried pesticide residues that can remain in the application equipment. Use the following steps to clean all mixing and spray equipment immediately following applications of Alligare Chlorsulfuron 75:

- 1. Drain the spray tank and then use fresh water to rinse the interior surfaces of the tank. Then flush the tank, boom, and hoses with water for at least 5 minutes.
- 2. Use fresh clean water to fill the tank and add a cleaning solution<sup>†</sup>. Flush the boom, hoses, and nozzles with the cleaning solution. Allow the equipment to sit for 15 minutes with agitation running, and then drain the tank.
- 3. Repeat Step 2.
- 4. Repeat Step 1.
- 5. Remove and clean the nozzles and screens separately. Traces of the cleaning solution can be removed by rinsing the tank thoroughly with clean water and flushing the water through the hoses and boom.

<sup>†</sup>Cleaning Solutions approved for spray equipment cleanup:

- 1. One gallon of 3% ammonia per 100 gallons of water.
- 2. "Nutra-sol" (carefully follow the directions for use on the "Nutra-sol" label).
- 3. Loveland Spray Tank Cleaner (carefully follow the directions for use on the Loveland Spray Tank Cleaner label).
- "Tank-Cleaner" (carefully follow the directions for use on the "Tank-Cleaner" label).

#### **TANK MIXTURES**

Other herbicides which are registered for the same uses as Alligare Chlorsulfuron 75 (pasture, range, CRP Program, or non-crop sites) may be tank mixed with Alligare Chlorsulfuron 75. Use whichever label has the most restrictive directions for the tank mix. Do not tank mix Alligare Chlorsulfuron 75 with  $DuPont^{TM}$  HYVAR® X-L herbicide.

Before preparing large amounts of the tank mix, perform a jar test to insure the tank-mix partners are compatible with Alligare Chlorsulfuron 75. A clear jar with a lid can be used to mix the tank mix ingredients in their relative proportions. After adding the ingredients, invert the jar several times and then allow the jar to stand for 30 minutes. The mixture is compatible if, after 30 minutes, the solution remains mixed, or, if separation occurs, if the solution readily mixes again after agitation. Signs of incompatibility include separation into layers which do not readily remix when agitated, the presence of flakes, precipitates, gels, or heavy oily film on the jar.

#### **SPRAY EQUIPMENT**

**Pasture, Range or Conservation Reserve Program (CRP):** Make applications of Alligare Chlorsulfuron 75 by ground equipment, fixed wing aircraft, or helicopter.

**Non-crop sites:** Make applications of Alligare Chlorsulfuron 75 using ground equipment only unless otherwise specified in Supplemental or Special Local Need Labeling.

Refer to the manufacturer's documentation for additional information on GPA, pressure, speed, nozzle types and arrangements, nozzle heights above the target canopy, etc.

Use calibrated air or ground equipment and apply in a spray volume and delivery system to ensure a thorough, uniform spray coverage of weed pests. Higher spray volumes will produce better coverage to dense canopies of weeds. Do not overlap sprays. To avoid injury to desirable species, turn off spray booms while starting, turning, slowing, or stopping.

Severe injury or death of crops (excluding pasture, range and small grains) may occur if the same equipment used to apply Alligare Chlorsulfuron 75 to pasture, range, CRP or non-crop sites is used to apply other products to crops. Traces of Alligare Chlorsulfuron 75 in the spray equipment may injure or kill the crops (except pasture, range, and small grains).

Do not make applications using equipment and/or spray volumes or under weather conditions that might cause spray drift onto nontarget sites. Additional information is provided in the section, Spray Drift Management.

Use application equipment that will ensure constant agitation of Alligare Chlorsulfuron 75 spray solutions.

#### **GROUND APPLICATION**

#### **BROADCAST APPLICATION**

Apply Alligare Chlorsulfuron 75 at 20 to 40 GPA using calibrated ground broadcast application equipment. Optimum control is obtained when weeds are treated in a sufficient volume to receive a thorough, uniform coverage.

**Industrial turf:** Do not overlap sprays. To avoid injury to desirable species, turn off spray booms while starting, turning, slowing, or stopping.

#### HIGH VOLUME HANDGUN APPLICATION

Apply Alligare Chlorsulfuron 75 at 100 to 300 GPA using calibrated hand-gun broadcast application equipment. Mix 1 ounce Alligare Chlorsulfuron 75 in 100 gal of water. Do not apply more than 300 gal of spray mix per acre.

#### **INVERT SPRAY APPLICATION**

Apply the high viscosity invert solution of Alligare Chlorsulfuron 75 at 10 to 40 GPA. Mix ¼ to 3 ounces of Alligare Chlorsulfuron 75 in the water phase of the invert solution for application to 1 Acre. The labeled use rate for target weeds is found in the section, **Weeds Controlled By Alligare Chlorsulfuron 75**. Follow all use directions and precautionary statements appearing on the labels of the inverting oils and additives or in the operator's manual of the inverting equipment.

#### **SPOT APPLICATIONS**

**PASTURE, RANGE AND CONSERVATION RESERVE PROGRAM (CRP):** Spot applications will aid in the control of weeds in pastures, ranges, and CRP land. Apply Alligare Chlorsulfuron 75 using equipment such as back pack sprayers to deliver the spray to the foliage and stems. The height and density of weeds and type of application equipment employed will determine the application volume. Optimum results are obtained from a thorough, uniform coverage of the foliage stems. Postemergence control of weeds improves from the addition of a spray adjuvant (0.25% volume, or use the manufacturer's labeled rate).

Mix 1 gram of Alligare Chlorsulfuron 75 and the surfactant with 1 gallon of water. Spray the weeds so that the entire surface of the weeds become wet. At this rate, approximately 35 gallons of solution will treat 1 acre.

#### **NON-CROP SITES**

Mix 1-3 ounces of Alligare Chlorsulfuron 75 with 100 gallons of water. Do not apply more than 300 gallons of the Alligare Chlorsulfuron 75 at the 1 ounce spray mix rate per Acre, and no more than 100 gallons of the Alligare Chlorsulfuron 75 of the 3 ounce spray mix rate per Acre.

#### **SPRAY ADJUVANTS**

Include a high quality spray adjuvant (but not LI-700 or other acidifying adjuvants) with the Alligare Chlorsulfuron 75 to improve postemergence weed control. Follow the manufacturer's labeled rate for the adjuvant.

## **SPRAY DRIFT CONTROL AGENTS**

Include a spray drift control agent with the Alligare Chlorsulfuron 75 tank mix to reduce the chance of drift. Follow the manufacturer's labeled rate for the drift control agent.

#### **CROP ROTATION**

Do not treat all acres (pastures, rangeland or CRP) at the same time with Alligare Chlorsulfuron 75 if rotational crop plantback flexibility is desired.

#### FIFLD BIOASSAY

When crop or grass species/varieties which are not listed on this label are to be planted to areas previously treated with Alligare Chlorsulfuron 75, a field bioassay test must be carried out to determine if this species can be replanted without injury. Test the crop or grass intended to be planted the year following a treatment with Alligare Chlorsulfuron 75 by growing the crop or grass in small plots which received the Alligare Chlorsulfuron 75 treatment. The crop or grass response will determine the feasibility of rotating this crop or grass to large areas which had been treated with Alligare Chlorsulfuron 75 Additional information on the procedures for carrying out field bioassays can be obtained from your local dealer or Alligare, LLC representative.

#### **GRAZING/HAYING**

No hay harvest restrictions or grazing restrictions for livestock (including lactating animals) apply when Alligare Chlorsulfuron 75 is applied at up to 1 1/3 ounces per Acre. Animals do not need to be enclosed.

#### **AERIAL APPLICATION**

Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage.

Apply Alligare Chlorsulfuron 75 in a minimum of 3 GPA.

Solid stream nozzles which are oriented straight back must be used when applying Alligare Chlorsulfuron 75 by air in areas adjacent to sensitive crops. Avoid spray drift damage to sensitive crops downwind by adjusting the swath. To minimize spray drift, apply Alligare Chlorsulfuron 75 using ground equipment to treat border edges of fields. See additional information in the Spray Drift Management section, below.

#### **SPRAY DRIFT MANAGEMENT**

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions. AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

#### IMPORTANCE OF DROPLET SIZE

The most effective way to reduce the drift potential is to apply large droplets (>150-200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS! See WIND TEMPERATURE AND HUMIDITY, and SURFACE TEMPERATURE INVERSIONS sections of this label.

#### **CONTROLLING DROPLET SIZE-GENERAL TECHNIQUES**

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED. USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- 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.

#### **CONTROLLING DROPLET SIZE - AIRCRAFT**

- Number of Nozzles Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- Nozzle Orientation Orientating nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- Nozzle Type Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.

#### **BOOM LENGTH AND HEIGHT**

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- Boom length (aircraft) The boom length should not exceed ¾ of the wing length, using shorter booms decreases drift potential. For helicopters use a boom length and position that prevents droplets from entering the rotor vortices.
- Boom Height (aircraft) Application more than 10 ft. above the canopy increases the potential for spray drift.
- Boom Height (ground) Setting the boom at the lowest height which provides uniform coverage reduces the exposure of droplets to evaporation and wind. The boom should remain level with the crop and have minimal bounce.

#### **WIND**

Drift potential increases at wind speeds of less than 3 mph (due to variable direction and inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID APPLICATIONS DURING GUSTY OR WINDLESS CONDITIONS.

Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they effect spray drift.

#### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

#### SURFACE TEMPERATURE INVERSIONS

Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates a surface inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### **AGRICULTURAL USES**

### PASTURE, RANGE, AND CONSERVATION RESERVE PROGRAM (CRP)

**Directions for Application:** To control or suppress weeds found in permanent (non-rotational) pastures, range and CRP lands, apply Alligare Chlorsulfuron 75 at the rates listed in the table below and follow all directions for use on this label. Apply by ground or air (fixed wing aircraft or helicopter) equipment. Up to 1/3 ounces Alligare Chlorsulfuron 75 may be applied only as a spot treatment for specific grasses only if the resulting injury and possible loss of forage is acceptable.

**Timing:** Optimum results are seen when *perennial* weeds are treated in the bud to bloom or the fall rosette stage and when *annual* weeds are treated at early growth stages.

Weeds: Refer to the section Weeds Controlled by Alligare Chlorsulfuron 75.

Restrictions: Do not apply more than 1 1/3 ounce of Alligare Chlorsulfuron 75 per acre per year.

**NOTE:** No hay harvest restrictions or grazing restrictions for livestock (including lactating animals) apply when Alligare Chlorsulfuron 75 is applied at up to 1 1/3 ounces per Acre.

Animals do not need to be enclosed.

#### Precautions:

- Severe stunting and injury will occur from application of Alligare Chlorsulfuron 75 to sensitive broadleaf forage species (such as clover and alfalfa).
- Injury to forage grasses which are under stress (due to drought, insects, disease, cold temperature or poor fertility) may occur from Alligare Chlorsulfuron 75 applications.
- Do not apply Alligare Chlorsulfuron 75 to forage grasses unless well-established or the newly emerged seedlings of sensitive forage grasses will be injured.
- Tolerance of different varieties and species of forage grasses to Alligare Chlorsulfuron 75 may vary. Before using Alligare Chlorsulfuron 75 on a certain grass for the first time, only apply Alligare Chlorsulfuron 75 to a small area. Once it has been determined that injury will not occur, larger areas may be treated in the next season. Examples of varietal sensitivity to Alligare Chlorsulfuron 75 include.
  - abortion or suppression of seedheads by some cool season grasses if Alligare Chlorsulfuron 75 is applied before the initiation of flowering
  - possible severe injury in perennial and Italian ryegrasses
  - temporary stunting or yellowing of fescues

#### RATES FOR CONTROL OR SUPPRESSION OF WEEDS IN FORAGE GRASSES

¼ to ½ ounce per Acre	e of Alligare Chlorsulfuron 75
Bluestems, big, little, plains, sand, ww spar (Andropogon spp.)	Kleingrass (Panicum coloraturm)††
Buffalograss (Buchloe dactyloides)	Lovegrasses, sand, weeping (Eragrostis spp.)
Fescue, tall, Kentucky, hard, creeping (Festuca spp.)†	Sideoats gramma (Bouteloua curtipendula)
Green needlegrasses (Stipa viridula)††	Switchgrass (Panicum virgatum)
Indiangrass (Sorghastrum nutans)	Wildrye (Elymus spp.)
<u></u>	of Alligare Chlorsulfuron 75
Bahiagrass (Paspalum notatum)	Bromegrass, meadow, smooth ( <i>Bromus spp.</i> )
Bermuda grass(Cynodon dactylon)	Orchardgrass†† (Dactylis glomerata)
Blue gramma (Bouteloua gracilis)	Wheatgrasses, crested, intermediate, pubescent, slender, streambank, tall, thick, spike, western, (Agropyron spp.)
Bluegrass (Poa spp.)	
† For sensitive fescue, use the lower use rate.	

†† Do not use Alligare Chlorsulfuron 75 on this grass in California.

#### **NON-AGRICULTURAL USES**

#### **NON-CROP SITES - INDUSTRIAL AREAS**

To control annual, biennial and perennial broadleaf weeds found in non-crop, industrial areas, apply Alligare Chlorsulfuron 75 at the rates listed in the sections below and follow all directions for use on this label. Apply by ground equipment unless directed otherwise by Special Local Need or Supplemental labeling. Make preemergent or early postemergent spray applications of Alligare Chlorsulfuron 75 to actively germinating or growing **annual** weeds. **Perennial weeds** are best controlled from application of Alligare Chlorsulfuron 75 when weeds are in the bud to bloom or fall rosette stage.

#### INDUSTRIAL TURF (UNIMPROVED ONLY)

**Directions for Application:** To control weeds found in industrial turf (unimproved), on roadside or other non-crop sites, apply Alligare Chlorsulfuron 75 at the rates listed in the table below and follow all directions for use on this label. The higher Alligare Chlorsulfuron 75 rates will control weeds for longer periods of time compared with the lower Alligare Chlorsulfuron 75 rates. Temporary chlorosis of desirable grasses may occur when Alligare Chlorsulfuron 75 is applied at the higher rate or in combination with a surfactant.

**Timing:** Make applications of Alligare Chlorsulfuron 75 when desirable grasses have become well-established to avoid any top kill or stand reduction. Optimum results are seen if turf is treated at greenup.

Weeds: Refer to the section Weeds Controlled by Alligare Chlorsulfuron 75.

#### RATES FOR CONTROL OR SUPPRESSION OF WEEDS IN INDUSTRIAL TURF

¼ to ½ ounce per Acre of Alligare Chlorsulfuron 75			
Fescue (Festuca app.)	Smooth brome (Bromus invermis)		
½ ounce per Acre of Alligare Chlorsulfuron 75			
Bentgrass (Agrostis spp.)	Kleingrass (Panicum coloratum)		
Bluestems, big, little, plains, sand, ww spar	Lovegrasses, sand, weeping (Eragrostis spp.)		
(Andropogon spp.)			
Buffalograss (Buchloe dactyloides)	Prairie sandreed (Calamovilfa longifolia)		
Galleta ( <i>Hilaria jamesii</i> )	Sheep fescue (Festuca ovina)		
Needlegrass, green (Stipa viridula)	Sideoats gramma (Bouteloua curtipendula)		
Green sprangletop (Leptochloa dubia)	Switchgrass (Panicum virgatum)		
Indiangrass (Sorghastrum nutans)	Wildrye grasses, beardless, Russian ( <i>Elymus spp.</i> )		
Indian ricegrass (Oryzopsis hymenoides)			
¼ to 1 ounce per Acre o	f Alligare Chlorsulfuron 75		
Bahiagrass (Paspalum notatum)	Bromegrass, meadow, smooth (Bromus spp.)		
Bermudagrass (Cynodon dactylon)	Orchardgrass (Dactylis glomerata)		
Blue gramma (Bouteloua gracilis)	Wheatgrasses, crested, intermediate, pubescent, slender, streambank, tall, thick, spike, western (Agropyron spp.)		
Bluegrass (Poa spp.)			

#### **GROWTH SUPPRESSION AND SEEDHEAD INHIBITION**

**Directions for Application:** To suppress grass growth (chemical mowing) and inhibit seedhead formation, apply Alligare Chlorsulfuron 75 as a tank mix with other herbicides registered for this use and at the rates listed in the table below. Follow all directions for use on this label. The higher Alligare

Chlorsulfuron 75 rates will control weeds for longer periods of time compared with the lower Alligare Chlorsulfuron 75 rates.

**Timing:** Make applications of Alligare Chlorsulfuron 75 when desirable grasses have become well-established to avoid any top kill or stand reduction. Time application to occur at green-up and before seed-heads emerge (boot stage).

Weeds: Refer to the section Weeds Controlled by Alligare Chlorsulfuron 75.

#### Precautions:

- To avoid injury, do not use Alligare Chlorsulfuron 75 or Alligare Chlorsulfuron 75 in a tank mix with Embark® 2S on bahiagrass turf or turf that is under stress (due to drought, insects, disease, cold temperature, or poor fertility).
- To avoid injury, apply Alligare Chlorsulfuron 75 only to turf that has been established for at least 1 year.
- Wait 6 months after an application of Alligare Chlorsulfuron 75 before planting grass seed in treated areas. Cultivate the area before planting.
- To avoid turf injury, only make spot applications to control those weeds listed under the 1 to 3 oz rate in the Non-crop, Industrial Sites section of this label. Broadcast applications to turf at this 1 to 3 oz rate may cause excessive turf injury.

#### Restrictions:

• Broadcast applications: do not apply more than ½ ounce Alligare Chlorsulfuron 75 per Acre per year (12-months).

#### RATES FOR GROWTH SUPPRESSION AND SEEDHEAD INHIBITION

¼ ounce per Acre of Alligare Chlorsulfuron 75 PLUS ¼ to ½ pt Embark <sup>®</sup> 2S		
Fesuce (Festuca spp.)	Bluegrass (Poa spp.)	
½ ounce per Acre of Alligare Chlorsulfuron 75 PLUS ½ to 1 pt Embark <sup>®</sup> 2S †		
Fescue (Festuca spp.)	Smooth brome (Bromus invermis)	
Annual bluegrass (Poa annua)	Orchardgrass (Dactylis glomerata)	
Perennial ryegrass (Lolium perenne)	Reed canarygrass (Phalaris arundinacea)	
† For use in the Pacific Northwest Only		

# WEEDS CONTROLLED BY Alligare Chlorsulfuron 75

**NOTE:** The higher Alligare Chlorsulfuron 75 rates will control weeds for longer periods of time compared with the lower Alligare Chlorsulfuron 75 rates.

# TABLE OF WEEDS CONTROLLED AT DIFFERENT Alligare Chlorsulfuron 75 USE RATES

¼ to ½ ounce per Acre of Alligare Chlorsulfuron 75		
Annual sowthistle (Sonchus oleraceus)	London rocket (Sisymbrium irio)†	
Blue mustard (Chorispora tenella)	Mayweed (Anthemis cotula)†	
Common chickweed (Stellaria media)	Miner's lettuce (Montia perfoliata)†	
Common speedwell (Veronic officinalis)	Pineapple-weed (Matricaria matricarioides)†	
Common spikeweed (Hemizonia pungens)†	Prostrate pigweed (Amaranthus blitoides)†	
Conical catchfly (Silene conoidea)†	Redroot pigweed (Amaranthus retroflexus)	
Cutleaf eveningprimrose (Oenothera laciniata)†	Shepherd's purse (Capsella bursa-pastoris)†	
Fiddleneck, tarweed (Amsinckia lycopsoides)†	Smooth pigweed (Amaranthus chlorostachys)†	
Field pennycress (Thlaspi arvense)	Treacle mustard (Erysimum spp.)††	
Flixweed (Descurainia Sophia)	Tumble mustard, Jim Hill (Sisymbrium	
	altissimum)	

Hempnettle (Galeopsis spp.)†	Wild mustard (Sinapis arvensis)		
Henbit (Lamium amplexicaule)			
½ to 1 ounce per Acre of	½ to 1 ounce per Acre of Alligare Chlorsulfuron 75		
Bouncingbet (Saponaria officinalis)	Groundsel, common (Senecio vulgaris)†		
Bur beakchervil (Anthriscus caucalis)†	Musk thistle (Carduus nutans)		
Buttercup (Ranunculus spp.)	Smallseed falseflax (Camelina microcarpa)†		
Carolina geranium (Geranium carolinianum)†	Sweet clover (Melilotus spp.)††		
Common lambsquarter (Chenopodium album)	Tumble pigweed (Amaranthus albus)†		
Common sunflower (Helianthus annuus)	Turkey mullein (Eremocarpus setigerus)††		
Dandelion, common (Taraxacum officinale)††	Whitetop, hoar cress (Cardaria draba)†††		
Erect knotweed (Polygonum erectum)†	Wild buckwheat (Polygonum convolvulus)†		
Goldenrod (Solidago spp.)	Wild parsnip (Pastinaca sativa)		
1 to 3 ounces per Acre o	f Alligare Chlorsulfuron 75		
Asters (Aster spp.)	Horsetail (Equisetum spp.)		
Bedstraw (Galium spp.)	Italian ryegrass (Lolium multiflorum)††		
Black mustard (Brassica nigra)	Marestail/horseweed (Conyza canadensis)		
Bull thistle (Cirsium vulgare)	Pepperweed (Lepidium spp.)†		
Burclover (Medicago spp.)	Pepperweed (perennial) (Lepidium latifolium)		
Canada thistle (Cirsium arvense)	Poison-hemlock (Conium maculatum)		
Common cinquefoil (Potentilla canadensis)	Prostrate knotweed (Polygonum aviculare)		
Common mallow (Malva neglecta)	Puncturevine (Tribulus terrestris)		
Common mullein (Verbascum thapsus)	Red clover (Trifolium pretense)†		
Common ragweed (Ambrosia elatior)††	Russian knapweed (Acroptilon repens)†††		
Common tansy (Tanacetum vulgare)	Scotch thistle (Onopordum acanthium)		
Common teasel (Dipsacus fullonum)	Scouringrush (Equisetum hyemale)		
Common yarrow (Achillea millefolium)	Spreading orach (Atriplex patula)		
Corn spurry (Spergula arvensis)	Tansymustard (Descurainia pinnata)		
Cow cockle (Vaccaria pyramidata)	Tansy ragwort (Senecio jacobaea)†		
Curly dock (Rumex crispus)	White clover (Trifolium repens)		
Dyer's woad (Isatis tinctoria)	Wild carrot (Daucus carota)		
False chamomile (Matricaria maritime)†	Wild garlic/wild onion (Allium vineale)		
Foxtails (Setaria spp.)††	Yellow starthistle (Centaurea solstitalis)††		
† Do not use Alligare Chlorsulfuron 75 on this weed in California.			
†† Alligare Chlorsulfuron 75 provides only partial control of this weed.			
††† Time application to occur at prebloom to bloom and fall rosette stage.			

#### ADDITIONAL DIRECTIONS FOR SPECIFIC WEEDS

**Dalmation Toadflax** (*Linaria genistifolia*): For optimum control, apply in the fall at a rate of 2 to 3 ounces of Alligare Chlorsulfuron 75 per acre as a high volume foliar spray (minimum of 24 gallons of water per acre) plus a surfactant (refer to Spray Adjuvants section, above).

**Kochia, Russian Thistle, and Prickly Lettuce:** For optimum results, apply after the weeds have emerged but before matures seeds form. Use a tank mix of Alligare Chlorsulfuron 75 with herbicides with different modes of action (such as 2, 4-D plus dicamba).

**Yellow Toadflax** (*Linaria vulgaris*): For optimum control, use a minimum of 1.5 ounces of Alligare Chlorsulfuron 75 per acre.

Yellow Starthistle (Centaurea solstitialis): Use a tank mix of Alligare Chlorsulfuron 75 at ½ to 3 oz per Acre with other herbicides registered for this use (such as, Transline®, or Tordon® 22K or 2,4-D) at the tank-mix partner label rates. Refer to the Tank Mix section, above. Add a surfactant to improve control of

emerged weeds (refer to Spray Adjuvants section, above). For preemergence control of this weed (early emergence to bolting stage of growth), apply when rainfall is expected so that residues of Alligare Chlorsulfuron 75 reach the root zone. Note: the higher Alligare Chlorsulfuron 75 rates will control weeds for longer periods of time compared with the lower Alligare Chlorsulfuron 75 rates.

# **TIMING FOR REPLANTING OF GRASSES**

Non-crop areas that were treated in the spring or early summer with Alligare Chlorsulfuron 75 may be replanted with grasses after the minimum time periods noted in the tables below have elapsed. If an application of Alligare Chlorsulfuron 75 is made in late summer or early fall, replanting may be carried out after the minimum time periods noted in the tables below have elapsed **starting from the spring after the application took place.** When replanting grasses, the tolerance of different grass varieties and species to soils treated with Alligare Chlorsulfuron 75 may differ. If a grass species to be seeded is not listed in the tables below, carry out a field bioassay test (see section Field Bioassay, above) to determine if this species can be replanted without injury.

Species	Alligare Chlorsulfuron 75 Rate (oz per Acre)	Replant Interval, Days
For soils with a pl	l of 7.5 or less:	
Brome, meadow (Bromus erectus)	1/2-1	30
· · · · · · · · · · · · · · · · · · ·	1-2	60
Brome, smooth (Bromus invermis)	1/2-1	60
	1-2	120
Fescue, alta/tall (Festuca arundinacea)	1/2	60
	1	90
	2	150
Fescue, sheep (Festuca ovina)	1/2-1	60
	1-2	120
Foxtail, meadow (Alopecurus pratensis)	1/2	90
	1	120
	2	180
Needlegrass, green (Stip viridula)	1/2-2	30
Orchardgrass (Dactylis glomerata)	1/2	60
	1-2	90
Russian wildrye ( <i>Elymus spp.</i> )	1/2-2	30
Switchgrass (Panicum virgatum)	1/2-2	90
Timothy (Phleum pretense)	1/2	60
	1	120
	2	180
Wheatgrass, western (Agropyron smithii)	1/2	30
	1	60
	2	120
For soils having a pH		
Alkali sacaton (Sporobolus airoides)	1/2	30
	1	90
	2	>90
Bluestem, Big (Andropogon gerardii)	1/2	90
Brome, Mountain (Bromus marginatus)	1/2	30
	1	60
	2	>90
Gramma, Blue (Bouteloua gracilis)	1/2	30
	1	60
	2	>90
Gramma, Sideoats (Bouteloua curtipendula)	1-2	>90

Switchgrass (Panicum virgatum)	1-2	>90
Wheatgrass, Bluebunch (Agropyron spicatum)	1 1/3	30

#### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage.

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

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. riple 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 and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### 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:

<u>Warranty:</u> 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.

<u>Terms of Sale:</u> 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.

<u>Limitation of Liability:</u> 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.

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[EPA approval date]