



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

February 24, 2021

Shannon Cavanaugh
US Registration Manager
FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104

Subject: Registration Review Label Mitigation for Chlorimuron-Ethyl and Sulfentrazone
Product Name: F9016-2 DF Herbicide
EPA Registration Number: 279-9560
Application Dates: 12/15/2017; 12/15/2017
Decision Numbers: 553949; 553965

Dear Ms. Cavanaugh:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Sulfonylurea and Sulfentrazone Interim Decisions, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label 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.

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If you have any questions about this letter, please contact Darius Stanton by phone at 703-437-0433, or via email at stanton.darius@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Linda Arrington', with a stylized flourish at the end.

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

Enclosure

Sulfentrazone	Group	14	Herbicide
Chlorimuron-ethyl	Group	2	Herbicide

F9016-2 DF Herbicide

Alternate Brand Name: Authority Maxx

For selective early preplant, preplant burndown, preplant incorporated and preemergence weed control in soybeans in AL, AR, DE, GA, IA, IL, IN, KS, KY, LA, MD, MI, MN, MO, MS, NC, NE, NJ, OH, OK, PA, SC, TN, TX, VA, WI, and WV.

EPA Reg. No. 279-9560

EPA Est. No.

Active Ingredients	By Wt.
Sulfentrazone*.....	62.12%
Chlorimuron Ethyl*	3.88%
Other Ingredients	34.00%
TOTAL	100.00%

*F9016-2 DF contains 0.66 lb active ingredient per pound product (0.62 lb a.i./lb of sulfentrazone and 0.04 lb ai/lb of Chlorimuron ethyl)

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID

If Swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything to an unconscious person.

If in Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice

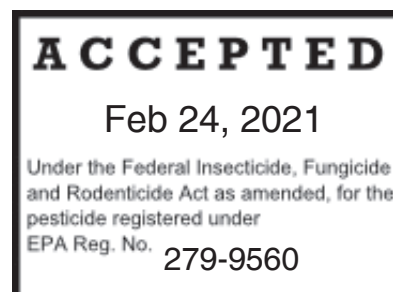
If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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 1-800-331-3148 for emergency medical treatment information.

Net Contents: _____

SOLD BY
FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104



PRECAUTIONARY STATEMENTS

Hazards to Humans and domestic Animals

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Wear protective eyewear.

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. 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.

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 part 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USERS SAFETY RECOMMENDATIONS

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

ENVIRONMENTAL HAZARDS

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

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

Surface water advisory: This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this product from runoff water and sediment. Runoff of this product will be greatly reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

Windblown Soil Particles

This product has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affect the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying this product if prevailing local conditions may be expected to result in off-site movement.

Non-target Organism Advisory

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the Spray Drift Management section of this label.

Physical /Chemical Hazards

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

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

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

Coveralls over long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride, and shoes plus socks.

WEED RESISTANCE MANAGEMENT

F9016-2 DF Herbicide, which contains the active ingredients sulfentrazone and chlorimuron-ethyl is a group 14 and 2 herbicide based on the mode of action classification system of the Weed Science Society of America.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different sites of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued effectiveness of this product depends on the successful implementation of a weed resistance management program.

To aid in the prevention of developing weeds resistant to this product, users should:

- Scout fields before application for weeds for identification of species and sizes.
- Start with a clean field, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small (less than 4 inches).
- Apply full rates of F9016-2 DF Herbicide for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect any poor performance or likely resistance in weeds.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Report any incidence of non-performance of this product against a particular weed to your FMC representative, local retailer, or county extension agent.
- Contact your FMC 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 sites of action. Products with multiple 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.

- If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 14 or 2 and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- 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.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum soil-applied herbicide with other sites of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative sites of action.
- Rotate the use of this product with non-Group 14 or 2 herbicides.
- Avoid making more than two applications of F9016-2 DF Herbicide and any other Group 14 or 2 herbicides within a single growing season unless mixed with an herbicide with a different site of action with an overlapping spectrum for the difficult-to-control weeds.
- Incorporate non-chemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Use good agronomic principles that enhance crop development and crop competitiveness.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.

Proper handling instructions: This product may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sink holes, 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 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.
- Product must be used in a manner which will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.

PRODUCT INFORMATION

F9016-2 DF is a dispersible granule formulation to be mixed with water and sprayed for selective early preplant, preplant burndown, preplant incorporated or preemergence weed control in soybeans. When applied according to the instructions on this label, it will control many broadleaf weeds and provide partial control of annual grasses.

Applications of F9016-2 DF require rainfall or sprinkler irrigation to activate the herbicide. Degree of control and duration of effect depend on: rate used, weed spectrum, growing conditions at and following time of

treatment, soil pH, texture, organic matter, moisture and precipitation. This label also contains use information which is applicable to all F9016-2 DF use geography.

BIOLOGICAL ACTIVITY

F9016-2 DF rapidly inhibits the growth of susceptible weeds. Following an application, susceptible weeds may germinate and emerge, but growth then ceases and leaves become yellow 3-5 days after emergence. Death of leaf tissue and growing point will follow in some species while others will remain green but stunted and noncompetitive. F9016-2 DF provides partial control of some annual grasses when used as an early preplant, preplant burndown, preplant incorporated or preemergence application, but other products may be needed to ensure adequate grass control.

Poor growing conditions such as excessive moisture, cool temperatures, and soil compaction or the presence of various pathogens may impact seedling vigor. Under these conditions the active ingredients in F9016-2 DF, like other soil applied herbicides, may injure soybeans.

Best results are obtained if F9016-2 DF is followed by rainfall or irrigation before weeds germinate. Several small rainfalls of less than 1/4" each are not as beneficial as one large rainfall of 1/2-1". If moisture is insufficient to activate the herbicide, a rotary hoeing or shallow cultivation should be made after emergence of the crop while weeds are small enough to be controlled by mechanical means.

ROTATIONAL GUIDELINES FOR ALL F9016-2 DF APPLICATIONS

When used as described, Table 1 describes the minimum length in months from the time of F9016-2 DF application until F9016-2 DF treated soil can be replanted to the crops listed in Table 1. Cover crops for soil health and erosion control can be planted at any time after an application of F9016-2 DF, but do not use for food or feed. Residual activity of F9016-2 DF may result in injury to some cover crop species if planted too soon following application. Consult your local University extension service for cover crop sensitivity to F9016-2 DF. **Prior to using F9016-2 DF, consideration should be given to crop rotation plans.** Crops other than soybeans may be extremely sensitive to low concentrations of F9016-2 DF remaining in the soil the next planting season. Choice of rotation crop is restricted following application of F9016-2 DF. When a recommended tank mix is used, consult the tank mix partner labels for recropping instructions and follow the directions that are most restrictive.

For Herbicide Use Rates – (See Table 2)

Refer to Importance of Soil pH section for additional information

Table 1

Crop	<u>Rotation Interval A</u>	<u>Rotation Interval B</u>	<u>Rotation Interval C</u>
	For use only in AL, AR, GA, IL, IN, KS, KY, LA, MO, MS, NE (east of Highway 281 and south of Highway 30), NC, OH, OK, PA, SC, TN and TX	For use only in DE, IA, MD, MI, MN, NE (west of Highway 281 and north of Highway 30), NJ, VA, WI and WV where soil pH is <6.8 <u>and</u> rates are <5 oz/A	For use only in DE, IA, MD, MI, MN, NE (west of Highway 281 and north of Highway 30), NJ, VA, WI and WV where soil pH is 6.8 to 7.6 <u>and/or</u> rates are >5 oz/A
	Recropping Interval in Months	Recropping Interval in Months	Recropping Interval in Months
Alfalfa	12	12	18
Barley	4	4	4
Cabbage	18	18	18
Canola (rapeseed)	36	36	36
Carrot	36	36	36
Clover	18	18	18
Corn, field**	10	10	18

Corn, sweet	18	18	18
Cotton	18 or 12***	18 or 12***	18
Cucumber	18	18	18
Dry Beans	12	12	18
Flax	18	18	18
Lentils	18	18	18
Mustard	18	18	18
Oats	12	12	18
Onion	36	36	36
Peanuts	9	18	18
Potato	36	36	36
Pumpkin	18	18	18
Rice	10	10	18
Rye	4	4	4
Sorghum	18* or 10	18* or 10	18
Soybeans †	Anytime	Anytime	Anytime
Sugar Beets	36	36	36
Sunflowers	18	18	18
Tobacco	10	10	18
Tomato (transplant)	15	15	18
Watermelon	18	18	18
Wheat	4	4	4
Any other crop not listed	36	36	36

Use rotational interval C above, if an application of F9016-2 DF herbicide is applied in the states of AL, AR, GA, KY, LA, MO Bootheel, MS, NC, OK, SC, TN and TX where soil pH is greater than 6.8.

Crops that have rotational intervals greater than 12 months after a F9016-2 DF application are the result of crop injury concerns. The crops should only be planted after a successful bioassay.

* Sorghum may be planted after 10 months where F9016-2 DF herbicide was applied at rates 6.4 oz/acre or less.

** Field corn includes corn grown for grain, silage, popcorn, seed corn.

*** Cotton may be planted after 12 months where F9016-2 DF herbicide was applied at rates 5 oz/acre or less and meets the following conditions:

- Medium and fine soils
- pH <7.2
- Rainfall or irrigation must exceed 15" after application of F9016-2 DF to rotate to cotton

†Do not feed treated soybean forage or soybean hay to livestock.

WEEDS CONTROLLED – PREEMERGE:

When used as directed F9016-2 DF will provide control of the following weed species:

Carpetweed	Russian Thistle
Copperleaf, Hophornbeam	Nutsedge, Purple
Copperleaf, Virginia	Nutsedge, Yellow
Florida beggarweed	Pigweed
Jimsonweed	Palmer amaranth
Kochia	Redroot
Lambsquarters	Smooth
Mallow, Venice	Spiny amaranth
Morningglory	Poinsettia, wild
Annual	Prickly sida (teaweed)
Ivyleaf	Purslane, common
Entireleaf	Senna, Coffee
Small flower	Smartweed (annual)
Tall	Spurge, Spotted
Mustard, wild	Velvetleaf
Nightshade, Black	Waterhemp, common

Nightshade, Eastern Black	Waterhemp, tall
	Star of Bethlehem

When used as directed F9016-2 DF will provide partial control of the following weeds:

Barnyardgrass	Mexicanweed
Burcucumber	Panicum, Texas and fall
Cocklebur	Pitted Morningglory
Crabgrass	Ragweed, common
Foxtail, species	Ragweed, giant
Goosegrass	Sesbania, Hemp
Johnsongrass, seedling	Sicklepod
Nightshade, Hairy	Signalgrass, broadleaf
Marestail*	Sunflower, wild

*F9016-2 DF must be tank mixed with 2,4-D, dicamba or Sharpen¹ for burndown of marestail.

Pitted morningglory, cocklebur, common ragweed, giant ragweed and wild sunflower may emerge at various times during the growing season. They may require cultivation or a follow up application of postemergence herbicides for season-long control.

APPLICATION INFORMATION

Equipment/Spray Volumes

Ground Application: Apply uniformly by ground equipment with a properly calibrated sprayer equipped with fan-type nozzles or other appropriate nozzles. Adjust spray pressures to recommendations that are appropriate for the nozzle type being utilized. Sprayer and spray nozzles should be set to minimize the risk of fine droplets (<150 microns), yet achieve adequate coverage of existing weeds. Use nozzles that require screens no finer than 50 mesh. Use 10 to 40 gals of water per acre.

Continuous agitation in the spray tank is required to keep the product in suspension. Avoid overlap and shut off spray booms while starting, turning, slowing or stopping, as injury to the crop may result.

Aerial Application

F9016-2 DF may be applied by air using properly calibrated nozzle types and arrangements that will provide optimum coverage while producing minimal amounts of fine droplets. Apply sufficient spray volume to achieve adequate coverage. Apply a minimum of five (5) gallons of finished spray per acre. Do not apply when wind speed favors drift beyond the area intended for treatment.

Spray Tank Preparation

It is important that spray equipment is clean and free of existing pesticide deposits before using F9016-2 DF. Follow the spray tank cleanout procedures specified on the label of product previously sprayed. If no cleanout procedure is provided, follow the cleanout procedure in **SPRAYER CLEANUP** section of this label.

Mixing Instructions

1. Fill the tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of F9016-2 DF.
3. Once the F9016-2 DF is fully dispersed, maintain agitation and continue filling tank with water.
4. F9016-2 DF should be thoroughly mixed with water in the spray tank before adding any other material. As the tank is filling add (in the following order): other herbicide(s), the required spray adjuvant, and ammonium sulfate and/or liquid nitrogen fertilizer where required.
5. Apply F9016-2 DF spray solution within 24 hours of mixing to avoid product degradation.
6. If the mixture has settled, thoroughly reagituate before using.
7. To improve mixing with liquid fertilizers prepare a slurry in water before adding to spray tank.

SPRAYER CLEANUP

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of F9016-2 DF as follows:

1. Drain tank; thoroughly hose down the interior surfaces of the tank; then flush tank, boom, and hoses with clean water for a minimum of 5 minutes.
2. Partially fill the tank with water and add one of the cleaning agents listed below. Complete filling the tank with water, then flush the cleaning solution through the boom, hoses, and nozzles. Add water to completely fill the tank and allow to agitate or recirculate for at least 15 minutes. Again, flush the boom, hoses and nozzles, and drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing water and the cleaning agent.
4. Repeat Step 2.
5. Thoroughly rinse the tank with clean water for a minimum of 5 minutes, flushing water through the boom and hoses.

NOTE: Use any of the following cleaning agents. Carefully read and follow the individual cleaning agent instructions.

1. One gallon of household ammonia (containing 3% active) per 100 gallons of water
2. Commercial spray tank cleaner

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.

Should small quantities of F9016-2 DF 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. FMC accepts no liability for any effects due to inadequately cleaned equipment.

SPRAY DRIFT MANAGEMENT

Ground Boom Applications:

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

Aerial Applications:

- Aerial application is allowed only when environmental conditions prohibit ground application.
- Do not release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use one-half swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

Boom-less Ground Applications:

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

SPRAY DRIFT ADVISORIES

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

IMPORTANCE OF DROPLET SIZE

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

Controlling Droplet Size – Ground Boom

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

Controlling Droplet Size – Aircraft

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

BOOM HEIGHT – Ground Boom

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

RELEASE HEIGHT - Aircraft

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

SHIELDED SPRAYERS

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

TEMPERATURE AND HUMIDITY

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

TEMPERATURE INVERSIONS

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

WIND

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

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

Boom-less Ground Applications:

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

IMPORTANT PRECAUTIONS

1. Back to back application of ALS or ALS containing herbicides can occasionally result in residual herbicide stacking and potential crop injury. The applicator and grower are responsible and should be aware of previous herbicide use and potential interaction it may have with F9016-2 DF application
2. All direct or indirect contact (such as spray drift) to other crops or to land scheduled to be planted to crops other than soybeans should be avoided.
3. Ensure the seed furrow is closed and the seed covered on acres treated with F9016-2 DF
4. Soybean stunting may occur if excessive rainfall occurs after application but before soybeans emerge. Injury is more prevalent under poor drainage or compacted conditions or when soil is saturated for long periods of time. Soybeans outgrow stunting once favorable growing conditions return.
5. Do not apply F9016-2 DF if there are visible signs of cracking due to soybean emergence, or serious crop injury such as but not limited to stand loss may result.
6. Seedling disease, nematodes, cold weather, deep planting (more than 2"), excessive moisture, high salt concentration, or drought may weaken soybean seedlings and increase the possibility of crop injury.
7. Do not tankmix F9016-2 DF with organophosphate insecticides. Do not apply F9016-2 DF within 14 days before or after an organophosphate insecticide, as severe crop injury may occur.
8. When tank mixing, follow the most restrictive use rates and precautions of the mixing partners.

IMPORTANCE OF SOIL PH

Soil pH varies greatly, even within the same field. pH variations as much as 2 pH units are common. Composite soil samples taken across an entire field, such as those samples taken for soil fertility recommendations, may not detect areas of high pH. Sub-sampling is recommended for areas likely to have pH values higher than the field average. The following is a non-inclusive list of potential high pH areas where subsampling is recommended.

- Where different soil types are evident within a field, sample soil types separately.
- Where conditions vary within a field, sample areas separately, such as:
 - Areas bordered by limestone gravel roads,
 - River bottoms subject to flooding,
 - Low areas in hardpan soils where evaporative ponds may occur,
 - Eroded hillsides,
 - Along drain tile lines, and
 - Areas where drainage ditch spoil has been spread.
- Where lime has not been deeply incorporated, soil may exhibit significantly higher pH values in the upper 3 inches of soil. Composite soil samples taken at a 6-8 inch depth may not reflect the elevated pH near the surface. In these cases shallow sampling, the upper 3 inches, is advised.

Determine soil pH by laboratory analysis using a 1:1 soil:water suspension.

APPLICATION DIRECTIONS FOR USE ON SOYBEANS

- Apply F9016-2 DF according to rates in Table 2 as directed for specific types of application and geographic areas.
- Follow all label restrictions regarding soil type, soil pH, organic matter, rotational crop intervals, geographic location, and weed pressure, in selecting the rate of F9016-2 DF from Table 2.
- Use of F9016-2 DF on soils which exceed pH 6.8 may result in unacceptable injury to the following rotational crop. F9016-2 DF may be used on fields which are generally pH 6.8 or less, but which may contain isolated areas where the pH exceeds 6.8 only if the following rotational crop is soybeans.

RESTRICTIONS

Single application: Do not apply more than 9.6 oz of F9016-2 DF (0.37 lb ai sulfentrazone and 0.22 lb ai chlorimuron-ethyl) more than once per acre per year.

Split application: Two applications totaling the full labeled rate 9.6 oz of F9016-2 DF (see Table 2) (0.37 lb ai sulfentrazone and 0.22 lb ai chlorimuron-ethyl) may be made per acre per year.

Do not make more than 2 applications per year. This product is for use only in AL, AR, DE, GA, IA, IL, IN, KS, KY, LA, MD, MI, MN, MO, MS, NC, NE, NJ, OH, OK, PA, SC, TN, TX, VA, WI, and WV.

Do not apply to black belt soil of Alabama or Mississippi with a soil pH >6.8 or history of nutrient deficiency such as iron chlorosis, as injury may occur.

Do not follow F9016-2 DF with a post-emergence application of another chlorimuron-ethyl containing herbicide in the same cropping season.

Do not apply F9016-2 DF to soils with soil pH greater than 7.6.

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

Do not feed treated soybean forage or soybean hay to livestock.

Do not apply F9016-2 DF if there are visible signs of cracking due to soybean emergence, or serious crop injury may result.

Do not apply or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots, or injury to desirable trees and plants may occur.

Do not tank mix F9016-2 DF with organophosphate insecticides. Do not apply F9016-2 DF within 14 days before or after an application of an organophosphate insecticide, as severe crop injury may occur.

When tank mixing this product with other pesticides, follow the most restrictive of the labeling limitations and precautions of all products used in the mixture.

Table 2: Herbicide Use Rate

Fall application, Early Pre-plant, Preplant Burndown, Pre-plant Incorporated, and Preemergence: No-Till, Minimum-till, Conventional tillage

Soil Texture	Organic Matter	
	0.5 – 2%	2 – 4%
	oz/A Product (lb ai/A)	
Coarse*: Loamy Sand, Sandy loam	5.0 (0.206) – 6.0 (0.248)	6.0 (0.248) – 7.0 (0.289)
Medium: Loam, Silt Loam, Silt, Sandy clay loam	6.0 (0.248) – 7.5 (0.309)	7.0 (0.289) – 8.0 (0.33)
Fine: Silty Clay Loam, Clay Loam, Clay	7.0 (0.289) – 8.0 (0.33)	8.0 (0.33) – 9.6 (0.396)

***Do not use this product in coarse sand soils with <1% organic matter.**

Apply F9016-2 DF according to this rate table for types of application and specific geographic areas.

APPLICATION METHODS:

Do not apply F9016-2 DF after the soybean crop has emerged or severe injury or death of the crop may occur. F9016-2 DF may be applied by any of the methods listed below.

CONSERVATION TILLAGE:

Early Pre-plant in No-Till, Minimum Till, or Stale seedbed

F9016-2 DF applied early Pre-plant will provide burndown of many existing weeds as well as preemergence broadleaf weed control. When applied as a burndown treatment, F9016-2 DF is rainfast after one hour. For burndown or control of existing vegetation, an appropriate burndown herbicide at labeled rates is recommended such as 2,4-D, glyphosate, glufosinate, paraquat, dicamba or Sharpen etc. and should be applied in combination with F9016-2 DF. Follow all label directions for the burndown herbicide including application timing, spray volume, adjuvants to achieve control of targeted weeds. For applications of F9016-2 DF made from 30 – 60 days before planting apply the higher rate in the appropriate soil range from Table 2 depending on the soybean system being grown.

Preplant Incorporated

Uniformly incorporate F9016-2 DF or F9016-2 DF tank mixes no deeper than 2" prior to planting soybeans. If tank-mixing F9016-2 DF with a companion herbicide, follow all label instructions for the companion herbicide, including proper incorporation of the companion herbicide in the top 2" of soil. Improper incorporation can result in erratic weed control or potential crop injury.

Preemergence

F9016-2 DF may be applied at planting time or within 3 days after planting, but before seed emergence. F9016-2 DF may be applied alone or in tank mix combinations with other registered soybean herbicides. When applied in tank mix combinations, follow applicable use directions, including application rates, precautions and restrictions of each product in the mixture. The seed furrow should be completely closed and seed covered before any applications of F9016-2 DF.

Fall Application and Spring Pre-plant Burndown of Broadleaf Weeds

F9016-2 DF can provide for some increased burndown activity on emerged weeds in no-till applications, but is not intended to replace part or all of an appropriate preplant burndown program. For control of the weeds listed below in no-till / minimum till fields, F9016-2 DF must be tank-mixed or used in combination with a full burndown program. This may include 2,4-D alone or in combination with Aim¹, dicamba, glyphosate, glufosinate, paraquat, or other appropriate burndown herbicides in tank-mixes at their appropriate rate for the size and species of weeds present. Reduced rates of F9016-2 DF and/or the corresponding burndown partner herbicides can result in weed escapes and unsatisfactory performance.

Chickweed*	Nightshade species
Dandelion	Pennycress
Garlic, wild	Pigweeds
Henbit	Ragweed, common
Lambsquarters	Ragweed, giant
Lettuce, prickly	Shepherd's-purse
Marestail**	Smartweeds, annual
Mustard, tansy	Sunflower
Mustard, wild	Waterhemp species

*For chickweed control add glyphosate or Express or Dicamba.

** For glyphosate resistant biotypes, include an alternative and effective mode of action to achieve complete burndown.

For burndown control, pick the appropriate rate from **Rate Table 2** and apply with:

- For complete burndown of emerged annual grasses or broadleaf weeds or for burndown of weeds not listed above, F9016-2 DF must be tank mixed with: Sharpen¹, glyphosate, glufosinate, paraquat, 2,4-D alone or in combination with Aim or other appropriate burndown herbicides. Some weed species have developed resistance to one or more herbicide classes. The burndown tank-mix with F9016-2 must contain one or more herbicides that will control targeted weed species and resistant bio-types.
- Crop Oil Concentrate (COC) or Methylated Seed Oil (MSO) at 1% v/v 1 gallon per 100 gallons of spray solution, or Non-ionic surfactant (NIS) at 1 qt./100 gallon of spray solution.
- In addition to the specific adjuvants above, other adjuvants may be used if they provide the same or similar functions as those previously mentioned. The addition of other adjuvants or fertilizers such as ammonium sulfate (AMS) may aid in control of weeds when used with appropriate companion herbicides. Consult specific companion herbicides for additional adjuvant, and fertilizer recommendations when applying for burndown of existing vegetation.
- Use flat fan nozzles or other appropriate nozzle types and a minimum of 10 gallons of water per acre. Where dense vegetation or heavy crop residues are present, increasing the spray volume to 15-20 gallons per acre or more may improve spray coverage and weed control.

To select the proper tank mix product, identify the weeds which need to be controlled and consult the product labels to determine which product is needed. Consult the companion tank mix herbicide label for use instructions, rates, precautions, restrictions, and other use information.

For instructions on how to prevent spray drift see Spray Drift Management section.

STORAGE AND DISPOSAL

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

Pesticide storage

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

In Case of Spill

Avoid contact. Isolate areas and keep out animals and unprotected persons. **Confine Spills. Call CHEMTREC (Transportation and spills): (800) 424-9300.**

To Confine Spills.

Dike surrounding area; sweep up spillage, Dispose of in accordance with information given under Pesticide Disposal. Wash spill area with water, absorb with sand, cat litter or commercial clay, sweep up and dispose of in an approved manner. Place damaged container in a large holding container. Identify contents per required hazardous waste labeling regulations.

Pesticide Disposal

Pesticide wastes are toxic. 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 of the nearest EPA Regional Office for guidance.

Container Handling

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: (For containers greater than 5 gallons) Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. (For containers 5 gallons or less) Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Returnable/Refillable Containers - Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

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Notice: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, loss of yield or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of FMC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

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