

279-3464

7/31/2014

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, D.C. 20460

EPA Reg. Number:
279-3464

Date of Issuance:
JUL 31 2014

NOTICE OF PESTICIDE:
 Registration
 Reregistration
 (under FIFRA, as amended)

Term of Issuance: **unconditional**

Name of Pesticide Product:
F9312-3

Name and Address of Registrant (include ZIP Code):

FMC Corporation
1735 Market Street
Philadelphia, PA 19103

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 registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration review/reregistration of your product when the Agency requires all registrants of similar products to submit data.
2. Make the following label revision(s):
 - a. Revise "EPA Reg. No.279-xxx" to "EPA Reg. No. 279-3464."
 - b. Assure that the EPA establishment number and net contents are also added to the final printed label.
3. Within one year of the date on this registration notice, the Storage Stability (830.6317) and Corrosion Characteristics (830.6320) studies must be submitted. They must be conducted in the commercial containers of this product and observations should be made at 0, 3, 6, 9, and 12 month intervals.
4. Per 40 CFR 156.10(6), submit one copy of your final printed labeling 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 sec.6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. The basic formulation (dated 6/25/2012) and Alternate #1 formulation (dated 7/31/12) are acceptable and will be added to your file. If you have any questions regarding this notice, please contact Beth Benbow of my staff at benbow.bethany@epa.gov.

Signature of Approving Official:

Kathryn V. Montague
 Project Manager 23
 Herbicide Branch
 Registration Division (7505P)

Date:

JUL 31 2014

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Group 14 & 15 Herbicide

F9312-3

For preplant burndown/ preemergence, preplant incorporated and postemergence control in cotton and spring and winter wheat.

ACCEPTED
JUL 31 2014
Under the Federal Insecticide, Fungicide, and Herbicide Act, as amended, the pesticide registered under EPA Reg. No. 279-3464

EPA Reg. No. 279-XXX	EPA Est. 279-XX
ACTIVE INGREDIENT: (1)	By Wt.
Pyroxasulfone.....	37.10
Carfentrazone.....	2.65
Other Ingredients	60.25
Total:	100.0%

F9312-3 is a suspoemulsion containing 4.00 lb active ingredient per gallon (containing 3.733 lb ai of pyroxasulfone and 0.267 lb ai of carfentrazone).

KEEP OUT OF REACH OF CHILDREN CAUTION/AVISO

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

FIRST AID (2)

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

If 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 by mouth 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.



FMC Corporation, Agricultural Products Group
1735 Market Street, Philadelphia, PA 19103

Net Contents:

HOTLINE NUMBER (3)
 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.

ATTENTION (4)
 Although this label may appear similar to the label on a product you may have used, there may be important label differences. Users must read, understand and strictly follow all label directions, precautions and restrictions.

It is the user's responsibility to be sure the product is approved for sale or use on the intended crop and for use in the specific geographic area. It is the user's responsibility to be aware of and to follow all State or local precautions or restrictions not appearing on this product label. Prior to purchase or use of this product, read the Conditions of Sale and Limitation of Warranty and Liability on page 5 of this label. If the terms and conditions are unacceptable, return the product immediately in the original and unopened container.

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PRECAUTIONARY STATEMENTS (5)

Hazards to Humans and Domestic Animals

Caution

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

Personal Protective Equipment (PPE) (6)

Applicators and other handlers must wear: long sleeved shirt and long pants, chemical resistant gloves such as barrier laminate, butyl rubber ≥ 14 mils, or viton ≥ 14 mils, shoes plus socks.

For aerial applications, mixers and loaders must also wear: PF.5 respirator

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

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

User Safety Recommendations:
Users should:

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

ENVIRONMENTAL HAZARDS (7)

This pesticide is toxic to fish, aquatic invertebrates, and to some plants at very low concentrations. 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 from treated areas may be hazardous to terrestrial and aquatic plants in neighboring areas. Do not contaminate water when disposing of equipment wash waters or rinsate. Do not discharge effluent containing this active ingredient into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

Ground Water Advisory: This chemical and its degradation products have properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisories: 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 aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

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 a high potential for reaching both surface water and aquatic sediment via runoff for several months or longer 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 pyroxasulfone and its degradation product, (5- difluoromethoxy-1H-pyrazol-4-yl) methanesulfone acid (M1), from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

Point Source Contamination: To prevent point source contamination **do not** mix or load this or any other pesticide within 50 feet of 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 pad or dike mixing/ loading areas as described below.

Mixing, loading, rinsing, or washing operations performed within 50 feet of a well are allowed only when conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be on or move across the pad. The pad must be self contained to prevent surface water flow over or from the pad. The pad capacity must be maintained at 110% of that of the largest pesticide container or application equipment used on the pad and has sufficient capacity to contain all products spills, equipment or container leaks, equipment wash waters and rainwater that may fall on the pad. The containment capacity does not apply to vehicles delivering pesticides shipments to the mixing/ loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

Care must be taken when using this product to prevent back siphoning into wells, spills or improper disposal of excess pesticide, spray mixes, or rinsates. Check valves or anti-siphoning devices must be used on all mixing equipment.

Endangered Species Protection Requirements: This product may have effects on federally listed threatened or endangered plant species or their critical habitat. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county or parish in which you are applying the pesticide. To determine whether your county or parish has a Bulletin, and to obtain that Bulletin, consult "http://www.epa.gov/espp", or call 1-800-447-3813 no more than 6 months before using this product. Applicators must use Bulletins that are in effect in the month in which the pesticide will be applied. New Bulletins will generally be available from the above sources 6 months prior to their effective dates.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY (8)

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, 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, to the extent consistent with applicable law, Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors. Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT.

Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) seller or FMC, and, to the extent permitted by applicable law, buyer assumes the risk of any such use. To the extent consistent with applicable law, FMC or seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF FMC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT. **This Condition of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.**

STORAGE AND DISPOSAL (9)

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage

Store product in original container only, well ventilated area, separately from fertilizer, feed, or foodstuffs and away from other pesticides. Do not contaminate water, food, or feed by storage or disposal. 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.

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.

Container Disposal (10)

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.

Metal or Plastic Containers - 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. Then offer for recycling if available, or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

(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 by other procedures approved by state and local authorities. Do not cut or weld metal containers. 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, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

RESISTANCE MANAGEMENT (11)

Mode of action (11.1)

F9312-3 contains pyroxasulfone which acts to inhibit very long-chain fatty acid synthesis as a Group 15 (WSSA)/ Group K3 (HRAC) herbicide. It is a root and shoot growth inhibitor that controls susceptible germinating seedlings before or soon after they emerge from the soil.

Any weed population may contain or develop plants naturally resistant to pyroxasulfone and other Group 15 herbicides. Weed species with resistance to Group 15 may eventually dominate the weed population if Group 15 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by pyroxasulfone or other Group 15 herbicides.

Resistant Weeds (11.2)

Some weeds are known to develop resistance to herbicides that have been used repeatedly. While the development of resistance is well understood, it is not easily predicted. Therefore herbicides should be used in conjunction with resistance management strategies in the area. Consult the local or State agricultural advisors for herbicide resistance strategies. If weed resistance should develop in the area, this product used alone may not continue to provide sufficient levels of weed control. If the reduced levels of control cannot be attributed to improper application timing, unfavorable weather conditions or abnormally high weed pressure, a resistant strain may have developed. To reduce the potential for weed resistance, use this product in a rotation program with other classes of chemistry and modes of action. Always apply this product at the labeled rates and in accordance with the use directions. For optimum performance, scout fields carefully and begin applications when weeds are small. If resistance is suspected, contact the local or State agricultural advisors.

Glyphosate Resistant Weeds (11.3)

Some populations of weeds may be tolerant or resistant to glyphosate based herbicides. Applying F9312-3 in a tank mixture with glyphosate for control of emerged resistant weeds larger than specified in **Tables 4 and 6** in a postemergence application may result in unsatisfactory control. Follow all directions, restrictions and precautions on the EPA-approved label for each product in the tank mixture.

DIRECTIONS FOR USE (12)

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.

AGRICULTURAL USE REQUIREMENTS (13)

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, chemical resistant gloves such as barrier laminate, butyl rubber ≥ 14 mils, or viton ≥ 14 mils, and shoes plus socks.

PRODUCT INFORMATION PRODUCT INFORMATION (14)

F9312-3 can be applied in all tillage systems (conventional, reduced and no-tillage). F9312-3 can be applied in the fall or in the spring as a preplant, pre plant incorporated, preemergence, or early post emergence treatment for susceptible grass and broadleaf weeds in cotton and spring and winter wheat. Consult individual crop sections for specific use instructions.

Weed Size:

When applying F9312-3 alone for post emergent weed control, apply before the weeds have reached the maximum height listed in **Tables 4 and 6**.

Application after weeds have reached the listed maximum height for control could result in commercially unacceptable weed control. For control of weeds in

post applications larger than listed in Tables 4 and 6 and for wider spectrum, apply in tank-mixture with herbicide(s) that are labeled for control of targeted weeds. Uniform spray coverage is necessary for optimum performance.

Always read and follow label directions for all tank mix products before using.

Application Instructions and Timings:

Moisture is necessary to activate the active ingredient pyroxasulfone in soil for weed control. Dry weather following applications of F9312-3 may reduce effectiveness. However, when adequate moisture is received after dry conditions, F9312-3 will control susceptible germinating weeds. F9312-3 may not control weeds that germinate after application but before an activating rainfall and/or irrigation of at least 0.5 inch, or weeds that germinate through cracks resulting from dry soil. When adequate moisture is not received after F9312-3 application, weed control may be improved by irrigation. If no rain occurs within 7 days after application, apply overhead irrigation if available at 0.5 to 0.75 inch total volume. Use a maximum of 0.5 inch on coarse textured soils and a maximum of 1.0 inch on medium and fine textured soils. Do not use on peat or muck soils or mineral soils with 10% or more organic matter content. Refer to the crop specific information section for specific application rates, timings and the restrictions and limitations by crop and use pattern. Crop seeds must be planted a minimum of 1 inch deep.

Application Precautions for Post Emergence Applications:

1. If applying F9312-3 post emergence, avoid applications when crop foliage is wet due to heavy dew, rain, or irrigation moisture. If F9312-3 is applied post emergence, shortly before or soon after rainfall, crop response can occur. Recovery from this response is rapid and normal growth is not delayed. Crop yields will not be impacted by this crop response.
2. Do not apply if crop is under severe stress due to drought, cold weather, hail, flooding, water-logged or compacted soil, disease, insect damage, nutrient deficiency (especially low nitrogen levels), or other causes.
3. Do not irrigate within 4 hours of a post emergence application of F9312-3. Rainfall or irrigation within 1 hour may wash F9312-3 off of the weeds during this period and may reduce post emergence performance.
4. Observe all precautions and limitations on the label of each product used in tank mixture with F9312-3.

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Restrictions

- Do not apply this product through any type of irrigation system.
- Do not use flood irrigation to apply, activate or incorporate this product.
- Do not exceed the maximum seasonal use rates.
- Do not apply to frozen or snow-covered ground.

Ground Application

Use sufficient spray pressure and spray volume for accurate and uniform application. Refer to instructions for the spray equipment used to determine the actual minimum volume. The carrier may be either water or a sprayable fluid fertilizer. Do not apply this product without dilution in a spray carrier. For preplant, preplant incorporated, or preemergence applications, apply F9312-3 in a minimum of 5 gallons of water per acre or 20 or more gallons of sprayable fluid nitrogen fertilizer per treated acre for weed control applications. For postemergence applications, apply F9312-3 in a minimum of 10 gallons per acre of finished spray solution. If a dense crop and/or weed canopy is present, use up to 40 gallons of spray solution per acre.

Aerial Application

Use nozzle types and arrangements that will provide optimum coverage while producing a minimal amount of fine droplets. Apply at a minimum of 3 gallons of finished spray per acre. Spray volumes greater than 3 GPA may be needed for dense weed populations or with dense crop canopies.

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 pad 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 wash water, and rainwater that may fall on the pad. Surface water shall not be allowed to

either flow over or from the pad, which means the pad must be self contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specific minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

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

MIXING AND LOADING INSTRUCTIONS (15)

Mixing Instructions:

1. The spray equipment must be clean before using this product. If it is contaminated with other materials, mixing problems and/or clogging can occur and/or crop response can occur.
2. Prepare no more spray mixture than is needed for the immediate application. Applying the product immediately after preparation ensures that it is in suspension. If application is delayed, agitation to re-mix the products and checking for resuspension ensures proper blending.
3. Maintain maximum agitation throughout the spraying operation.
4. Flush the spray equipment thoroughly after each use and apply rinsate to an appropriate area.

Mixing Steps:

1. Add 1/4 -1/2 of the required amount of clean water and/or fertilizer to the spray or mixing tank.
2. While maintaining agitation, continue filling the spray tank. When the tank is 3/4 full, add any dry formulation tank mix partners and allow them to completely and uniformly disperse.
3. Add the required amount of F9312-3 to the spray tank while maintaining agitation. After the product has completely and uniformly dispersed into the tank mix, add any other liquid tank mix partners and allow them to completely and uniformly disperse.
4. Add the proper amount of spray adjuvant and continue agitation while adding

the remaining water and/or fertilizer.

5. Complete filling the tank with clean water and/or fertilizer to maintain sufficient agitation at all times to insure surface action until the mixture is uniform.

6. After use, thoroughly clean the sprayer according to this label (see Cleaning Spray Equipment) and any tank mix partner labels.

Mixing F9312-3 in Tank Mixtures with Other Herbicides and Fluid Fertilizers

F9312-3 is compatible with most commonly used herbicides, insecticides, fungicides, and spray adjuvants. BEFORE MIXING F9312-3 WITH OTHER REGISTERED PRODUCTS FOR ANY USE ON THIS LABEL, READ THE LABEL OF THE TANK MIX PARTNER TO BE CERTAIN IT IS LABELED FOR THE USE ON THE TARGET CROP AND THAT USE PATTERNS ARE COMPATIBLE WITH THOSE OF F9312-3. When using F9312-3 in a tank mixture with other pesticides, observe the most restrictive label limitations and precautions for the products being used.

F9312-3 can be used with commonly used clear fluid nitrogen fertilizers (e.g. 28% or 32% UAN). It is recommended that a preliminary compatibility jar test be conducted using appropriate ratios of F9312-3 and fertilizer. Prepare no more spray mixture than is needed for the immediate application. Applying the product immediately after preparation ensures that it is in suspension. If application is delayed, agitation to re-mix the products and checking for resuspension ensures proper blending.

Compatibility Test

Conduct a jar test before mixing to ensure F9312-3 compatibility with tank mix partners and adjuvants. The following test assumes a spray volume of 25 gallons per acre. For other spray volumes, make appropriate changes in the ingredient rates.

1. Add 1.0 pt. of water to each of 2 one-quart jars. Note: Use the same source of water and the other components in the compatibility test that will actually be tank mixed and applied. It is important that all components are mixed at a temperature similar to the temperature of those used for the actual application.
2. To one of the jars, add 1/4 tsp. or 1.2 milliliters of a compatibility agent approved for this use (1/4 tsp. is equivalent to 2 pt/100 gallons spray). Shake or stir gently to mix.
3. To both jars, add the appropriate amount of herbicide(s). If more than one

herbicide is used, add them separately with dry herbicides first, flowables next and emulsifiable concentrates last. Finally, add the appropriate amount of any adjuvants that will be used. After each addition, shake or stir gently to thoroughly mix.

(Dry Herbicides and Adjuvants: For each pound to be applied per acre, add 1.4 tsp. to each jar.

Liquid Herbicides and Adjuvants: For each pint to be applied per acre, add 0.5 tsp. or 2.5 milliliters to each jar).

4. After adding all ingredients for the tank mixture, replace and tighten lids.

Shake jars by inverting the mixture and then let stand for 15 to 30 minutes.

5. After waiting period, check jars for separation, precipitates, flakes, films on the side, gels or other signs of incompatibility. If mixtures separate but can be remixed, the mixture can be sprayed as long as good agitation is used.

6. If the mixtures are incompatible, then try these methods to overcome the problem. A) Make a slurry of dry pesticides in water before adding them to the tank B) Add more compatibility agent or increase the water volume of the mixture.

7. If tank mixtures are incompatible, then do not spray the mixture. (Properly dispose of testing jars and any pesticide waste).

Spray adjuvants for burndown and post applications

An adjuvant or a product containing an adjuvant approved for use on intended crop may be used with F9312-3 for maximum consistent performance.

Adjuvants for F9312-3:

Use a spray adjuvant from one of these classes for optimum performance for burndown or post applications.

Non-ionic surfactant (NIS) - must have a minimum of 80% of the constituents effective as spray adjuvant at the rate of 1 quart/100 gallons of spray volume (concentration of 0.25%).

Crop Oil Concentrate (COC) or Methylated Seed oil (MSO) - petroleum or vegetable-based oil containing not less than 12% emulsifier. Use 1-2 pts. /A and the concentration must not exceed 2.5% volume/volume. COC/MSO may improve performance under dry conditions and low relative humidity.

Silicone-based surfactant - apply at a rate of 1 qt/100 gallons or a spray volume concentration of 0.25% or as specified on the adjuvant label.

In addition to an adjuvant, urea ammonium nitrate (UAN) at 1-2 qts. /A or spray

grade ammonium sulfate (AMS) at specified use rates may also be added to the spray solution.

Adjuvants for F9312-3 in Tank Mixtures with Other Herbicides

When tank mixing with other herbicides, use the adjuvant labeled for use with the tank mix partner. Follow all restrictions and precautions on the tank mix partner's label.

DRY FERTILIZER APPLICATION (16)

F9312-3 may be impregnated or coated onto dry bulk granular fertilizer carriers for fall and preplant surface and preplant incorporated applications. Follow all F9312-3 label restrictions, instructions and precautions.

All individual state regulations relating to dry granular fertilizer blending, registration, labeling and application are the responsibility of the individual and/or company selling the herbicide/ fertilizer mixture.

Select the F9312-3 application rate per acre from this label and determine the quantity of dry bulk fertilizer to be applied per acre (use a minimum of 200 pounds and a maximum of 750 pounds per acre). Use the equation below to determine the amount of F9312-3 needed per ton of fertilizer applied.

$(\text{Fl oz of F9312-3 per acre} \times 2000) / \text{Pounds fertilizer per acre} = \text{oz of F9312-3 for 1 ton of fertilizer}$

F9312-3 may be impregnated on many commonly used dry fertilizer but do not impregnate on ammonium nitrate, fertilizers containing ammonium nitrate, potassium nitrate, sodium nitrate or powdered limestone.

To impregnate F9312-3 on bulk fertilizer, use a closed rotary drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment.

Mix F9312-3 with sufficient water to form a sprayable slurry mixture. Spray nozzles be directed to provide uniform fertilizer coverage while avoiding spray contact with mixing equipment. Non uniform impregnation can cause crop injury or unsatisfactory performance.

Spray the herbicide mixture onto the fertilizer after blending has started. If necessary, include a suitable drying agent to ensure a spreadable herbicide impregnated fertilizer. Apply treated fertilizer immediately after impregnation to avoid lump formulation and spreading difficulties. Accurate calibration of fertilizer application equipment and uniform fertilizer distribution is essential for satisfactory weed control. Apply the mixture uniformly to the soil with proper equipment immediately after blending and moisture is required for activation.

SPRAY DRIFT MANAGEMENT (17)

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

F9312-3 contains a contact protoporphyrinogen oxidase (PPO) inhibitor herbicide. Avoid any drift conditions that would allow the product to contact desirable vegetation. The mist from spray drift may cause injury to sensitive plants.

The interaction of equipment and weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all factors involved in minimizing drift potential.

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

Where states have more stringent regulations, they must be observed.

INFORMATION ON DROPLET SIZE

The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Use nozzle types arrangements that will provide maximum coverage and minimize the potential for off target movement of spray particles. Droplets size for ground applications must be in the "medium" size category as defined in the August 1999 ASAE S572 publication entitled, "Spray Nozzle Classification by Drop Spectra". Refer to that publication for additional information. Regardless of droplet size, if applications are made improperly or under unfavorable environmental conditions off target movement will occur. (See Wind, Temperature and Humidity, and Temperature Inversion sections in this label).

Controlling Spray Droplet Size

VMD (Volume median diameter) – VMD is the expression of the droplet size of the spray cloud. The VMD value means that 50% of the droplets are larger than the expressed value and 50% of the droplets are smaller than the expressed value. Optimum F9312-3 spray clouds must be 450 microns with fewer than 10% of the droplets being 200 microns or less.

Volume - Use high flow rate nozzles that produce medium droplets to apply the highest practical spray volume.

Pressure - Use the lower spray pressures recommended for the nozzle and do not exceed the manufacturer's recommended pressure. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

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

Nozzle Orientation – Orienting nozzles so that the spray is released backwards parallel to the air-stream will produce larger droplets than other orientations. Significant deflection from horizontal will reduce droplet size and increase drift potential. For aerial application, orient nozzles so that the spray is released parallel to the airstream. A parallel orientation results in larger droplets than other orientations and reduces air turbulence and the production of small droplets. Significant deflection from horizontal will reduce droplet size and increase drift potential.

Nozzle Type - Use a nozzle type that is designed for the intended application. Do not use air inducing or flood type nozzles. For aerial applications, solid stream nozzles oriented straight back produce the largest droplets and potentially the least drift. Do not use nozzles that produce fine spray droplets (e.g. cone).

Ground Boom Application Height- Applications must not be made at a height greater than 4 feet above the top of the largest plants. Making applications at the lowest possible height reduces exposure of droplets to evaporation and wind. Aerial applications must not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety.

Swath Adjustment - When applications are made with cross wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path upwind. Swath adjustment distance must increase with increasing drift potential (higher wind, smaller drops, etc).

Wind - Variable wind speeds with changing directions may pose the largest potential for drift damage if crops other than rice are adjacent to the field to be sprayed. Drift potential is lowest between wind speeds of 2 to mph. However,

many factors, including droplet size and equipment type determine drift potential at any given speed. Applications must be avoided if wind speed is below 2 mph due to variable wind direction and high inversion potential.

NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity - When making applications in low relative humidity set up equipment to produce larger droplets to compensate for evaporation, but they still must remain within the medium droplet size category. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions – Do not spray at times when spray particles may be entrained into a temperature inversion layer. If inversion conditions are suspected, consult with local weather services before making an application. Applications must not occur during temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures 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 following 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 an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas – F9312-3 must only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitats for threatened or endangered species and non-target crops) is minimal.(e.g. when wind is blowing away from the sensitive areas). Maintain a 10-foot buffer between the application area and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas, shrublands, and croplands).

CLEANING SPRAY EQUIPMENT (18)

Many pesticides are very active at low rates, especially to sensitive crops. Residues left in mixing equipment, spray tanks, hoses, spray booms and

nozzles can cause crop effects if they are not properly cleaned. As soon as possible after spraying F9312-3 and before using the sprayer equipment for any other applications, the sprayer equipment must be thoroughly cleaned using the following procedure. In addition, users must take appropriate steps to ensure proper equipment clean-out for any other products mixed with F9312-3 as required on the other product labels. More complete cleaning can be achieved if the spray system is cleaned immediately following the application.

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

Do not apply sprayer cleaning solutions or rinsate to sensitive crops.

Do not store the sprayer for any extended period of time with F9312-3 spray solution remaining in the tank, spray lines, spray boom plumbing, spray nozzles or strainers.

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

Should small quantities of F9312-3 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.

When F9312-3 has been tank mixed refer to the label of the product used previously or tank mixed with F9312-3 for cleaning instructions.

WEEDS CONTROLLED (19)

1. F9312-3 Alone

At the rates and timings listed, F9312-3 applied **early preplant, preplant-incorporated, and preemergence** controls the weeds listed in **Table 1** when the product is used alone. F9312-3 only controls certain broadleaf weeds after they emerge (**Tables 4 and 6**). Weeds larger than the size indicated in **Tables 4 and 6** may only be partially controlled.

Table 1. Preplant/ Preemergence Weed Control
Common Name Scientific Name

Annual Grasses Controlled	
Barley, little	<i>Hordeum leporium</i>
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bluegrass, annual	<i>Poa annua</i>
Canarygrass	<i>Phalaris canariensis</i>
Crabgrass, large	<i>Digitaria sanguinalis</i>
Crabgrass, smooth	<i>Digitaria ischaemum</i>
Fescue, rattail	<i>Vulpia myuros</i>
Foxtail, giant	<i>Setaria faberi</i>
Foxtail, green	<i>Setaria viridis</i>
Foxtail, yellow	<i>Setaria pumila</i>
Foxtail, bristly	<i>Setaria verticillata</i>
Goosegrass	<i>Eleusine indica</i>
Johnsongrass (seedling)	<i>Sorghum halepense</i>

Panicum, fall	<i>Panicum dichotomiflorum</i>
Rice, red	<i>Oryza sativa</i>
Ryegrass, Italian	<i>Lolium multiflorum</i>
Ryegrass, rigid	<i>Lolium rigidum</i>
Witchgrass	<i>Panicum capillare</i>
Annual Grasses Suppressed	
Brome, downy	<i>Bromus tectorum</i>
Brome, Japanese	<i>Bromus japonicus</i>
Cheat	<i>Bromus secalinus</i>
Cupgrass, Southwestern	<i>Eriochloa acuminata</i>
Cupgrass, woolly	<i>Eriochloa villosa</i>
Millét, wild proso	<i>Panicum miliaceum</i>
Oat, wild	<i>Avena fatua</i>
Panicum, Texas	<i>Panicum texanum</i>
Sandbur, longspine	<i>Cenchrus longispinus</i>
Shattercane	<i>Sorghum vulgare</i>
Signalgrass, broadleaf	<i>Brachiaria platyphylla</i>

Annual Broadleaves Controlled	
Amaranth, Palmer	<i>Amaranthus palmeri</i>
Amaranth, Powell	<i>Amaranthus powellii</i>
Carpetweed	<i>Mollugo verticillata</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Pigweed, tumble	<i>Amaranthus albus</i>
Purslane, common	<i>Portulaca oleracea</i>

Pusley, Florida	<i>Richardia scabra</i>
Sida, prickly (Teaweed)	<i>Sida spinosa</i>
Waterhemp, common	<i>Amaranthus rudis</i>
Waterhemp, tall	<i>Amaranthus tuberculatus</i>
Annual Broadleaves Suppressed	
Buckwheat, wild	<i>Polygonum convolvulus</i>
Chickweed, common	<i>Stellaria media</i>
Fleabane, hairy	<i>Conyza bonariensis</i>
Groundsel, common	<i>Senecio media</i>
Henbit	<i>Lamium amplexicaule</i>
Horseweed (maretail)	<i>Conyza canadensis</i>
Kochia (including triazine and ALS resistant)	<i>Kochia scoparia</i>
Lambsquarters, common	<i>Chenopodium album</i>
Jimsonweed	<i>Datura stramonium</i>
Mayweed, chamomile	<i>Anthemis cotula</i>
Morningglory, entireleaf	<i>Ipomoea hederacea integruscula</i>
Morningglory, ivyleaf	<i>Ipomoea hederacea</i>
Morningglory, pitted	<i>Ipomoea lacunosa</i>
Nightshade, black	<i>Solanum nigrum</i>
Nightshade, hairy	<i>Solanum physalifolium</i>
Nightshade, Eastern black	<i>Solanum ptycanthum</i>
Ragweed, common	<i>Ambrosia artemisiifolia</i>
Spreading orach	<i>Atriplex subspicata</i>
Velvetleaf	<i>Abutilon theophrasti</i>
Sedges Suppressed	
Nutsedge, yellow	<i>Cyperus esculentus</i>

Partial control (light gray) or suppression only. F9312-3 should be used in tank mixes and/or sequential applications with other herbicides for best results.

CROP USES (20)

Fall Applications for controlling weeds germinating the following spring in cotton and spring wheat (20.1)

F9312-3 may be applied in the fall to control weeds in conventional, minimum tillage, or no-till production systems planted the following spring. This fall application program will typically need to be followed with a suitable in-season at-plant preemergence or postemergence herbicide treatment to provide season long control of the complete target weed spectrum. Use only on medium soils at a use rate of up to 3.5 ounces. Use only on fine soils at a use rate of 3.75 ounces of F9312-3 per acre.

Fall Applications for controlling weeds germinating in the fall or winter annual weeds in cotton and wheat (20.2)

F9312-3 may be applied in the fall for burndown and residual control for crops that are to be planted the following spring (for applications to winter wheat in the fall, see the wheat section of this label for specific instructions). For control of emerged weeds in the fall use combinations with other burndown herbicides like Aim, 2,4-D, dicamba, glyphosate, paraquat or glufosinate. Follow all directions, restrictions and precautions on the EPA-approved label for each product in the tank mixture. If a sequential application program (fall application followed by spring application of F9312-3) is used the maximum combined rate of F9312-3 must not exceed 7.6 fl oz/A (0.223 lb ai/A containing 0.222 lb ai of pyroxasulfone and 0.0159 lb ai of carfentrazone) per cropping season for cotton and must not exceed 4.55 fl oz/A (0.142 lb ai/A containing 0.133 lb ai of pyroxasulfone and 0.0095 lb ai of carfentrazone) per cropping season in wheat. Do not exceed 2 inch incorporation depth if tilled after application. Use the highest rate within soil type. F9312-3 may be broadcast surface applied in the fall after crop harvest when soil temperatures at the 4-inch depth are sustained at less than 55° F and before the ground freezes to control weeds in minimum or no tillage fields planted the following spring. Fall applications must be made after October 1. Do not apply to frozen or snow covered soil.

Preplant, preemergence and early preplant applications (20.3)

F9312-3 may be applied prior to planting up to crop emergence. Apply F9312-3 alone or in tank mixtures, up to 14 days before planting cotton and up to 30 days before planting wheat. See specific crop sections for further directions

and use rates. For cotton and wheat, preplant surface applications are not recommended on coarse soils in areas where average annual rainfall (or rainfall + irrigation) typically exceeds 40 inches. Cultivation or a labeled postemergence herbicide application may still be required under certain conditions for complete weed control.

If weeds are present at the time of application, use additional weed control methods such as tank mixes with an appropriate postemergence herbicide(s) to control emerged weeds and follow all label directions, rates, restrictions, and precautions on the tankmixture partner labeling.

Preplant incorporated (PPI) applications (20.4)

For PPI applications of F9312-3 incorporate into the upper (1-2") soil surface up to 14 days before planting. Deeper incorporation may increase the potential for crop injury and also may result in reduced weed control. Use appropriate equipment that provides uniform shallow incorporation, such as a field cultivator, harrow, rolling cultivator or finishing disc.

Post-directed applications in cotton (20.5)

In cotton, apply F9312-3 from minimum of 6 inches to beginning bloom stage. The amount of F9312-3 to apply and the degree of weed control resulting from a F9312-3 application depends upon a variety of factors such as weeds present, stage of growth of the weeds, environmental conditions, growing conditions and soil type.

Under high moisture conditions the crop may experience some temporary crop response. The crop will rapidly outgrow these effects and develop normally with no reduction in yield.

Early Post emergence broadcast applications in wheat (20.6)

In wheat, apply F9312-3 from spiking up to 4th tiller growth stage. The amount of F9312-3 to apply and the degree of weed control resulting from a F9312-3 application depends upon a variety of factors such as weeds present, stage of growth of the weeds, environmental conditions, growing conditions and soil type.

Under high moisture conditions the crop may experience some temporary crop response. The crop will rapidly outgrow these effects and develop normally with no reduction in yield.

Split applications in labeled crops (20.7)

F9312-3 can be applied in sequential programs, but do not exceed the maximum use rate per cropping season. In early preplant and fall applications use up to 3.75 oz/A followed by a second application. Where weeds are emerged, use appropriate tank mixtures for control of the weed species present. The maximum combined rate of F9312-3 in cotton that may be applied in a cropping season is 7.6 fl oz/A (0.223 lb ai/A containing 0.222 lb ai of pyroxasulfone and 0.0159 lb ai of carfentrazone) on all soils. The maximum combined rate of F9312-3 in wheat that may be applied in a cropping season 4.55 fl oz/A (0.142 lb ai/A containing 0.133 lb ai of pyroxasulfone and 0.0095 lb ai of carfentrazone), for coarse, medium, and fine soils. Apply sequential applications a minimum of 14 days apart.

F9312-3 in Tank Mixtures in labeled crops (20.8)

For enhanced control of emerged weeds use F9312-3 in combination with other labeled burndown herbicide products for that crop like Aim, 2,4-D, dicamba, glyphosate, paraquat and glufosinate may be applied prior to planting at any time in combination with F9312-3. Follow all plant-back and rotational restrictions for F9312 and partner herbicides. Do not exceed a total of 0.025 lb ai/A of carfentrazone per application, not to exceed an in-season total of 0.124 lb ai/A for cotton. Do not exceed a total of 0.031 lb ai/A of carfentrazone per application, not to exceed an in-season total of 0.031 lb ai/A for wheat.

F9312-3 may be applied preemergence and postemergence with glufosinate or glyphosate based products, or other pre and postemergence broadleaf herbicides approved for use on cotton or wheat. Tank mixing F9312-3 with other postemergence herbicides may increase the speed of activity and provide control of the weeds listed in **Tables 4 and 6**. F9312-3 may be tank-mixed with labeled insecticides for that crop such as Hero™, or Mustang Maxx™ and with labeled fungicides. Some populations of weeds may be tolerant or resistant to glyphosate based herbicides. Applying F9312-3 in a tank-mix with glyphosate on resistant weeds larger than specified in Tables 4 and 6 may result in unsatisfactory control. Other herbicides in tank-mix with F9312-3 or separately may be required to achieve adequate control of these resistant biotypes. Follow all directions, restrictions and precautions on the EPA-approved label for each product in the tank mixture and follow the most restrictive requirements of the products being mixed.

RATE SELECTION / SOIL TEXTURE (21)

Unless a specific soil texture is mentioned, rate tables throughout this label refer to **Table 2** for soil texture groups: coarse, medium and fine. **Table 2** includes a complete listing of soil textures included in each of the soil texture grouping.

Table 2.

Coarse	Medium	Fine
Sand	Loam	Sandy clay
Loamy sand	Silt loam	Silty clay loam
Sandy loam	Sandy clay loam	Silty clay
	Silt	Clay loam
		Clay

COTTON - CROP SECTION (22)

Application Rates

Application rates for **F9312-3** when applied alone, in tank mix, or sequentially in cotton are provided in **Table 3**.

Table 3. Residual Rates of F9312-3 in Cotton

Application Timing	Use Rate (oz/A) by Soil Texture ¹ F9312-3 fl oz/A (lb a.i./A)		
	Coarse ²	Medium	Fine
Preplant Surface	1.365 – 1.82 (0.043-0.057)	1.82 – 2.73 (0.057-0.085)	2.73 – 3.80 (0.085 0.119)
Preplant Incorporated	1.365 – 1.82 (0.043-0.057)	1.82 – 2.73 (0.057-0.085)	2.73 – 3.80 (0.085 0.119)
Preemergence	1.365 – 1.82 (0.043-0.057)	1.82 – 2.73 (0.057-0.085)	2.73 – 3.80 (0.085 0.119)
Postemergence-Directed - Early and Lay-by	1.365 – 1.82 (0.043-0.057)	1.365 – 2.73 (0.043-0.085)	2.73 – 3.80 (0.085 0.119)

¹ Refer to **Table 2** for definitions of soil texture groups.

² **DO NOT** apply on **Coarse** soils categorized as Sand or Loamy Sand.

Cotton Use Rate Restrictions

- **DO NOT** apply more than 3.80 ozs/A of **F9312-3** in a single application.
- **DO NOT** apply more than a maximum cumulative amount of 7.6 fl oz/A (0.223 lb ai/A containing 0.222 lb ai of pyroxasulfone and 0.0159 lb ai of carfentrazone) of **F9312-3** per cropping season.
- **Seedling Depth:** Crop seeds must be planted a minimum of 1 in. deep.
- **Pre-harvest Interval:** Do not harvest for a minimum of 7 days after the last application.

Specific Cotton Use Instructions and Precautions

- Rainfall and/or irrigation totaling at least 0.5 inch prior to weed emergence may be necessary for herbicide activation and optimum weed control. If no rain occurs within 7 days after application, apply overhead irrigation if available, at 0.5 to 0.75 total volume. Use a maximum of 0.5 inch on coarse textured soils and a maximum of 1.0 inch on medium and fine textured soils.
- Excessive rainfall, irrigation, or prolonged cool and/or wet soil conditions after application of **F9312-3** from seed germination through seedling emergence may increase the risk of cotton seedling injury and should be avoided if possible.
- Before applying to cotton, verification of **F9312-3** selectivity on your variety must be confirmed to avoid injury to sensitive cotton varieties. Check with the local Cooperative Extension agent for information on potential **F9312-3** varietal sensitivity. If variety tolerance is unknown, such as with new varieties, apply **F9312-3** on a small area to confirm variety safety before use on large acreage.

Application Timings

F9312-3 may be applied in a single application or in sequential applications.

Preplant Surface or Preplant Incorporated Applications (up to 45 days prior to planting)

Apply **F9312-3** at the use rates specified in **Table 3** as a broadcast or banded spray to the soil surface or incorporated up to 45 days before planting on all soil types.

Preemergence Surface Application

Apply **F9312-3** at use rates specified in **Table 3** as a broadcast or banded spray to the soil surface after planting and before crop emergence.

DO NOT apply **F9312-3** directly to cotton as a broadcast postemergence spray after emergence (at-cracking) or injury may occur.

Postemergence-Directed – Early and Lay-by Application

F9312-3 is a contact herbicide for postemergence directed sprayer or hooded/shielded sprayer applications for the control of broadleaf weeds in cotton. Apply **F9312-3** alone or as a tank mixture with other herbicides to emerged and actively growing weeds. For specific mixing instructions, refer to the Mixing and Loading Instructions under the **PRODUCT INFORMATION** section. Applications of **F9312-3** tank mixes must be made with directed sprayers or hooded sprayers to prevent contact of spray solution with the cotton plant. Do not allow spray solution to contact cotton foliage, green stem tissue, or blooms. Directed spray equipment must position nozzles a minimum 3 to 4 inches above the soil, with nozzles directed beneath the crop canopy. **F9312-3** tank mix applications shall be made to cotton that is a minimum of 6 inches in height. Applications to cotton at 5 to 6 nodes or less must be made with hooded or shielded sprayer equipment to completely avoid contact with cotton plants. Apply lay-by applications of **F9312-3** tank mixtures at later growth stages of cotton when cotton plants have achieved a height of 12 inches or more with sufficient bark development and height differential between crop bottom leaves and the soil. Spray solution shall be directed at the base of cotton plants for minimal contact with green stem tissue or foliage while maintaining maximum contact with broadleaf weeds that are at appropriate treatment size. Do not apply when conditions favoring drift exist or wind is above 10 mph. For optimum performance, make application to actively growing weeds up to 4 inches tall and rosettes less than 3 inches across. Coverage is essential for good control. The use of an adjuvant is recommended for consistent control.

Table 4. Post-Directed Weed Control in Cotton

When use as directed, **F9312-3** will provide control of the listed weeds up to four (4) inches in height, or as specified.

Weeds Controlled* Common Names	F9312-3 -- fl oz/A (lb a.i./A)

Lambsquarters, common (up to 3 inches tall)	2.73-3.80 (0.085-0.119)
Morningglory, ivyleaf (up to 3 leaves)	
Morningglory, pitted (up to 3 leaves)	
Nightshade, Eastern black	
Pigweed, redroot	
Velvetleaf	
Waterhemp (up to 2 inches tall)	

* For labeled rates below 2.73 fl oz/A, only suppression of these weeds may occur.

Sequential Applications

If a sequential application program of F9312-3 is used (e.g. preplant or preemergence application followed by postemergence directed application), the maximum combined rate of F9312-3 that may be applied in a cropping season is 7.5 ozs/A on all soils. Separate sequential applications by at least 14 days.

WHEAT (Spring and Winter) - CROP SECTION (23)

Application Rates

Application rates for F9312-3 when applied alone, in tank mix, or sequentially are provided in **Table 5**.

Table 5. Residual Rates of F9312-3 in Spring and Winter Wheat

Application Timing	Use Rate (oz/A) by Soil Texture ¹ F9312-3 fl oz/A (lb a.i./A)		
	Coarse	Medium	Fine
Preplant Surface	1.27 – 2.73 (0.040-0.085)	1.82 – 3.64 (0.057-0.114)	2.73 – 4.55 (0.085- 0.142)
Preemergence	1.27 – 2.73 (0.040-0.085)	1.82 – 3.64 (0.057-0.114)	2.73 – 4.55 (0.085- 0.142)
Early Postemergence	1.27 – 2.73 (0.040-0.085)	1.82 – 3.64 (0.057-0.114)	2.73 – 4.55 (0.085- 0.142)

¹ Refer to **Table 2** for definitions of soil texture groups.

Spring and Winter Wheat Use Rate and Crop Restrictions

- **DO NOT** apply more than a maximum cumulative amount of 4.55 fl oz/A (0.142 lb ai/A containing 0.133 lb ai of pyroxasulfone and 0.0095 lb ai of carfentrazone) of **F9312-3** per cropping season.
- **DO NOT** apply to durum wheat
- **Do not** apply preplant incorporated in wheat
- **Do not** apply preplant, preemergence, or delayed preemergence to broadcast seeded wheat
- **Do not** apply preemergence if ¼ in. or more of rain is expected within 48 hour of application.
- **Do not** seed wheat deeper than 1.5 in. after a preplant application or before a preemergence or delayed preemergence application
- **Do not** irrigate fields after a preemergence or delayed preemergence application until wheat spikes.
- **Do not** harvest, feed, or graze within 7 days after application.

Specific Spring and Winter Wheat Use Instructions and Precautions

- Rainfall and/or irrigation totaling at least 0.5 inch prior to weed emergence may be necessary for herbicide activation and optimum weed control. If no rain occurs within 7 days after application, apply overhead irrigation if available, at 0.5 to 0.75 inch total volume. Use a maximum of 0.5 inch on coarse textured soils and a maximum of 1.0 inch on medium and fine textured soils.
- Excessive rainfall, irrigation, or prolonged wet soil conditions after application of F9312-3 from seed germination through seedling emergence may increase the risk of wheat seedling injury and should be avoided if possible.
- Before applying to wheat, verification of F9312-3 selectivity on your variety must be confirmed to avoid injury to sensitive wheat varieties. Check with the local Cooperative Extension agent for information on potential F9312-3 varietal sensitivity. If variety tolerance is unknown, such as with new varieties, apply F9312-3 on a small area to confirm variety safety before use on large acreage.

Application Timings

F9312-3 may be applied in a single application or in sequential applications.

Preplant Surface and Preplant Incorporated Applications

Apply F9312-3 at the use rates specified in **Table 5** as a broadcast spray to the soil surface no more than 30 days prior to planting on all soil types.

Incorporation in the soil by mechanical means will improve herbicide performance under limited activation moisture conditions. Attachments on the drill such as drag chains or drag harrows that provide some soil incorporation can improve weed control performance. Regardless of preplant application method, rainfall or irrigation will be necessary for optimum activation and weed control.

Preemergence Surface Application

Apply F9312-3 at use rates specified in **Table 5** after planting and before wheat spiking as a broadcast spray to the soil surface with uniform seedbed which is firm and free of clods. Complete seed furrow closure and adequate soil coverage must occur to prevent seed contact with F9312-3. Rainfall or irrigation prior to weed emergence will be necessary for herbicide activation and weed control.

Early Postemergence Application

Apply F9312-3 at use rates specified in **Table 5** as a broadcast spray to wheat at spiking up to the 4th tiller growth stage. F9312-3 will provide residual control of weeds germinating after application and rainfall / irrigation activation. F9312-3 will not control all germinated or emerged weeds, and may need to be applied as a tank mix or sequential application with a labeled postemergence herbicide(s) for control of any emerged weeds. Apply as early as possible to obtain better weed control and reduce weed competition. Do not apply when conditions favoring drift exist or wind is above 10 mph. For optimum performance, make application to actively growing weeds up to 4 inches tall and rosettes less than 3 inches across. Coverage is essential for good control. The use of an adjuvant is recommended for consistent control.

Table 6. Early Postemergence Weed Control in Wheat

When use as directed, F9312-3 will provide control of the listed weeds up to four (4) inches in height, or as specified.

Weeds Controlled* Common	F9312-3 -- fl oz/A (lb a.i./A)
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Names	
Lambsquarters, common (up to 3 inches tall)	2.73-4.55 (0.085-0.142)
Morningglory, ivyleaf (up to 3 leaves)	
Morningglory, pitted (up to 3 leaves)	
Nightshade, Eastern black	
Pigweed, redroot	
Velvetleaf	
Waterhemp (up to 2 inches tall)	

* For labeled rates below 2.73 fl oz/A, only suppression of these weeds may occur.

Sequential Applications

If a sequential application program of F9312-3 is used (e.g., preplant or preemergence application followed by early postemergence application), the maximum combined rate of F9312-3 that may be applied in a cropping season is 2.75, 3.5, and 4.5 oz/A (0.082, 0.106, and 0.133 lb ai/A of pyroxasulfone), respectively for coarse, medium, and fine soils.

Preplant or Preemergence followed by Postemergence Program

A programmed preemergence and postemergence weed management program will enhance degree and consistency of weed control, especially on species more problematic to manage. Apply F9312-3 at use rates specified in Table 5 as a preplant surface, PPI, or preemergence application following directions given in the respective sections above. Follow with a registered postemergence herbicide with proven efficacy to manage weed escapes, increase weed spectrum, and introduce an additional herbicide mode of action for weed resistance management. Follow all label use directions and precautions listed on the postemergence herbicide.

REPLANTING INSTRUCTIONS (24)

If cotton or wheat treated with F9312-3 is lost due to a natural catastrophe such as hail or frost, cotton, wheat, corn, and soybeans can be replanted immediately, provided this is not restricted on the label of a product used previously or by a product applied in a tank mixture with F9312-3.

ROTATIONAL CROPS (25)

Table 7.

Crop	F9312-3 SE Use Rate (oz/A)			
	1.82	3.64	5.46	7.28
	Rotational Crop Interval (months after application)			
Alfalfa	10	10	10	10
Corn	0	0	0	0
Cotton	0	2	4	4
Edible Peas and other Edible dry beans	11	11	11	11
Grasses grown for seed	18	18	18	18
Lentils	6	6	6	8
Peanut	4	4	4	4
Peas, field (dry)	4	6	6	8
Potato	4	4	4	4
Rice	10	12	18	24
Small grains (other than wheat)	11	11	11	18
Soybean	0	0	0	4
Sugarbeet	12	12	15	15

Sunflower	4	4	4	4
Wheat	0	1	4	6
Other crops	18	18	18	18

NOTE: For rotational crop restrictions when F9312-3 is used in tank mixtures or sequentially with other products, refer to the rotation intervals on the other product label for possible additional restrictions.

LABEL TRACKING INFORMATION (26)

Label Code: 07-29-14 Master Cotton Wheat

Replaces Label Code: 07-28-14

EPA Approval Date:

FMC Corporation
Agricultural Products Group
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