



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

April 29, 2015

Callista Chukwunenye, PhD  
Manager, Sr., Product Registrations  
FMC Corporation  
1735 Market Street  
Philadelphia, PA 19103

Subject: Label Amendment – adding aerial instructions and other “me-too” changes  
Product Name: F9316-2  
EPA Registration Number: 279-3449  
Application Date: December 17, 2014  
Decision Number: 498690

Dear Dr. Chukwunenye,

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

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

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under 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.

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Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Beth Benbow by phone at 703-347-8072, or via email at [benbow.bethany@epa.gov](mailto:benbow.bethany@epa.gov).

Sincerely,



Reuben Baris, Product Manager 25  
Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure

**RESTRICTED USE PESTICIDE**

Due to ground and surface water concerns. For retail sale to and use only by Certified Applicators, or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

Group **5,14,15** Herbicide

**F9316-2**

**For preplant burndown/ preemergence, preplant incorporated and early postemergence control in field corn, sweet corn and popcorn.**

<b>EPA Reg. No. 279-3449</b>	<b>EPA Est. 279-IL-1</b>
<b>ACTIVE INGREDIENT:</b>	<b>By Wt.</b>
Atrazine.....	42.50%
Pyroxasulfone.....	5.15%
Fluthiacet-methyl ...	0.15%
<b>Other Ingredients</b> ...	52.20%
Total:	100.0%

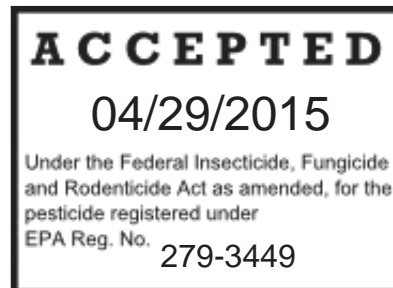
F9316-2 is a suspoemulsion containing 4.505 lb active ingredient per gallon (where 4.006 lb ai of atrazine, 0.485 lb ai of pyroxasulfone and 0.014 lb ai of fluthiacet-methyl).

**KEEP OUT OF REACH OF CHILDREN  
WARNING/AVISO**

Si usted no entiende la 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.)



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



**Net Contents:**

## 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 by mouth to an unconscious person.

**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 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.

## 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.

## ATTENTION

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**

### **Hazards to Humans and Domestic Animals**

#### **Warning**

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

#### **Personal Protective Equipment (PPE) (6)**

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

- Long sleeved shirt and long pants.
- Shoes and socks, and chemical resistant gloves.
- A chemical-resistant apron must be worn when mixing/loading, cleaning up spills, cleaning equipment, or otherwise exposed to the concentrate.
- For aerial application, mixers and loaders must also wear a Partial Face (PF5) respirator.

See **Engineering Controls** for additional requirements.

**User Safety Requirements:**

Follow manufacturer's instructions for cleaning/maintaining PPE. If no instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

**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 clothes.

**Engineering Control Statements:**

When applicators use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(5)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides [40 CFR 170.240(d)(6)]. Pilots must wear the PPE required on this labeling for applicators however, they need not wear chemical-resistant gloves when using an enclosed cockpit.

Flaggers supporting aerial applications must use an enclosed cab that meets the definition on the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240 (d)(5)] for dermal protection.

**ENVIRONMENTAL HAZARDS**

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.

F9316-2 contains the active ingredient atrazine. Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e. well drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

**Surface Water Advisories:**

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. Do not apply this product **within 66 feet of points where field surface water runoff enters perennial**

**or intermittent streams and rivers or within 200 feet of natural or impounded lakes and reservoirs.** If this product is applied to highly erodible land, the buffer or setback from runoff entry points must be planted to crop or seeded with grass or other suitable crop.

One of the following restrictions must be used in applying F9316-2 to tile outletted fields containing standpipes:

- Do not apply within 66 feet of standpipes in tile-outletted fields.
- Apply this product to the entire tiles-outletted field and immediately incorporate it to a depth of 2-3 inches in the entire field.
- Apply this product to the entire tile-outletted field under a no-till practice only when a high crop residue management practice is practiced. High crop residue management is described as a crop management practice where little or crop residue is removed from the field during and after crop harvest.

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.

### **Physical/Chemical Hazards**

Do not use or store near heat or open flame.

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

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**

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.

### **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**

**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**

### **Mode of action**

F9316-2 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. F9310-6 also contains fluthiacet-methyl which is a protoporphyrinogen oxidase (PPO) Group 14 (WSSA) inhibitor herbicide that is active on emerged weeds and atrazine, a photosystem II inhibitor (Group 5) (WSSA).

Any weed population may contain or develop plants naturally resistant to pyroxasulfone, fluthiacet-methyl, or atrazine and other Group 5, 14, or 15 herbicides. Weed species with resistance to Groups 5, 14, or 15 may eventually dominate the weed population if Groups 5, 14, or 15 herbicides are used repeatedly in the same 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, fluthiacet-methyl, atrazine or other Group 5, 14, or 15 herbicides.

### **Resistant Weeds**

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 details. 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 label listed rates and in accordance with the use directions. For optimum performance, scout fields carefully and begin applications when weeds are smaller rather than larger. If resistance is suspected, contact the local or State agricultural advisors.

### **Glyphosate Resistant Weeds**

Some populations of weeds may be tolerant or resistant to glyphosate based herbicides. Applying F9316-2 in a tank mixture with glyphosate for control of emerged resistant weeds larger than specified in table 6 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**

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.

#### **ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS**

**A VIOLATION OF FEDERAL LAW.** Before using this product, you must consult the Atrazine Watershed Information Center (AWIC) to determine whether the use of this product is prohibited in your watershed. AWIC can be accessed through ([[www.atrazine-watershed.info](http://www.atrazine-watershed.info)]), or ([1-866-365-3014]). If use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact FMC for a refund.

**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**

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 and shoes plus socks.

## PRODUCT INFORMATION

F9316-2 can be applied in all tillage systems (conventional, reduced and no-tillage). F9316-2 can be applied in the fall or in the spring as a preplant, preplant incorporated, preemergence, or early post emergence treatment for susceptible grass and broadleaf weeds in field corn, seed corn, sweet corn and popcorn.

### Weed Size

When applying F9316-2 alone for post emergent weed control, apply before the weeds have reached the maximum height listed in Table 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 Table 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.

### Application Instructions and Timings

Moisture is necessary to activate the active ingredients pyroxasulfone and atrazine in soil for weed control. Dry weather following applications of F9316-2 may reduce effectiveness. However, when adequate moisture is received after dry conditions, F9316-2 will control susceptible germinating weeds. F9316-2 may not control weeds that germinate after application but before an activating rainfall/ irrigation of at least ½ inch, or weeds that germinate through cracks resulting from dry soil. When adequate moisture is not received after F9316-2 application, weed control may be improved by irrigation. Do not use on peat or muck soils and 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.

## APPLICATION INFORMATION AND CROP RESTRICTION/LIMITATIONS

### Maximum application use rates:

On coarse textured soils do not apply more than 38.5 fl. oz. of F9316-2 per acre a single application or per year.

On coarse soils: Do not apply more than 0.146 lb. pyroxasulfone, 0.0089 lb. fluthiacet-methyl or 2.5 lbs atrazine per acre per year in a twelve month

cropping year including preplant burndown from any tank mix or sequential application programs.

On medium and fine soils, do not apply more than a total of 58.5 fl. oz. of F9316-2 per acre in a single application.

Do not apply more than 70.5 fl. oz. /A of F9316-2 per year from all pre-plant/burndown and post-emergent applications..

On medium and fine soils, do not apply more than 0.0089 lb ai/A of fluthiacet methyl, 2.5 lbs ai/A of atrazine, or 0.268 lb ai/A of pyroxasulfone per acre in a twelve month cropping year including preplant burndown from any tank mix or sequential application programs.

F9316-2 may be used prior to, or after applications of other pyroxasulfone or fluthiacet methyl containing herbicides.

### **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. Apply F9316-2 in a minimum of 10 gallons of water or sprayable fluid nitrogen fertilizer per treated acre for weed control applications. For postemergence applications, apply F9316-2 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 arrangement that will provide optimum coverage and minimize drift potential. Apply with in minimum of 5 gallons per acre of finished spray solution. For dense weed populations or heavy crop canopy, a higher spray volume may be required to obtain adequate spray coverage.

The following measures must be followed to reduce the potential of spray drift to non-target areas from aerial applications.

1. The distance of the outermost nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or 90% of the rotor blade diameter.
2. Use low drift nozzles such as straight-stream that produce coarse to very coarse droplets. Do not use nozzle that produce mist droplet spray.

3. Nozzles must always be backward, parallel with the airstream and never pointed downward more than 45 degrees.
4. Without compromising aircraft safety, application should be made at a height of 10 ft. or less above the crop canopy. Applicators must follow the most restrictive precautions to avoid drift hazards including those found in this labeling as well as applicable state and local regulations and ordinances.
5. Do not apply during periods of temperature inversions or stable atmospheric conditions.
6. Avoid potential adverse effects to non-target areas by maintaining a 30 ft 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, shrub lands, and crop lands).
7. Do not apply within 66 feet of where field surface water enters perennial or intermittent streams or rivers or within 200 feet of natural or impounded lakes or reservoirs. Refer to Spray Drift Management section for more information.

#### **Application Method Restrictions**

- Do not apply this product through any type of irrigation system.
- Do not use flood irrigation to apply, activate or incorporate this product.

#### **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.

Additional State imposed requirements regarding well-head setbacks and operational area containment must be observed.

This product must not be applied aerially or by ground within 66 feet of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 foot buffer or setback from runoff entry points must be planted to crop, seeded with grass or other suitable crop.

#### **Tile-Outletted Terraced Fields Containing Standpipes.**

To ensure the protection of surface water from runoff in fields through standpipes with tile-outlets in terraced fields, one of the following restrictions must be used in applying atrazine products.

1. Do not apply this product within 66 feet of standpipes in tile-outletted terraced fields.
2. Apply this product to the entire tile-outletted terraced field and immediately incorporate it to a depth of 2-3 inches in the entire field.
3. Apply this product to the entire tile-outletted terraced field under a no-till practice on when high crop residue management practices are used. High crop residue management is described as a crop management practice where little or no crop residue is removed from the field during or after crop harvest.

Where there are state/local requirements regarding atrazine use (including lower maximum rates, more restrictive application timings and/or greater setbacks) which are different from the label, the more restrictive requirements must be followed. Some states may have established rate limitations within specific

geographical areas. Consult your state pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations. Do not apply this product through any type of irrigation system. Do not use flood irrigation to apply or incorporate this product. This product must be used in a manner which will prevent back siphoning into wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.

## **MIXING AND LOADING INSTRUCTIONS**

### **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 F9316-2 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 (for burndown applications only) 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 F9316-2 in Tank Mixtures with Other Herbicides and Fluid Fertilizers**

F9316-2 is compatible with most commonly used herbicides, insecticides, fungicides, and spray adjuvants. BEFORE MIXING F9316-2 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 F9316-2. When using F9316-2 in a tank mixture with other pesticides, observe the most restrictive label limitations and precautions for the products being used.

F9316-2 can be used with commonly used clear fluid nitrogen fertilizers (e.g. 28% or 32% UAN). Perform a preliminary compatibility jar test using appropriate ratios of F9316-2 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**

Perform a jar test before mixing to ensure F9316-2 compatibility with tank mix partners and adjuvants (for burndown applications only). 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 (for burndown applications only). After each addition, shake or stir gently to thoroughly mix.

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

Liquid Herbicides and Adjuvants (for burndown applications only): 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 applications and postemergence applications.**

An adjuvant or a product containing an adjuvant approved for use for burndown is needed with F9316-2 for maximum consistent performance.

#### **Adjuvants for F9316-2:**

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

**Non-ionic surfactant (NIS)** - must have a minimum of 80% of the constituents effective as spray adjuvant at the use 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 should not exceed 2.5% volume/volume. COC/MSO may improve performance under conditions of 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 F9316-2 in Tank Mixtures with Other Herbicides**

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

## **DRY FERTILIZER APPLICATION**

F9316-2 may be impregnated or coated onto dry bulk granular fertilizer carriers for fall and preplant surface and preplant incorporated applications. Follow all F9316-2 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 F9316-2 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 F9316-2 needed per ton of fertilizer applied.

(fl. oz. of F9316-2 per acre X 2000) / Pounds fertilizer per acre = fl. oz. of F9316-2 for 1 ton of fertilizer).

F9316-2 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 F9316-2 on bulk fertilizer, use a closed rotary drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment. Mix F9316-2 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.

### **Fertilizer Impregnation Restrictions**

Impregnation of F9316-2 is restricted to commercial facilities. On-farm fertilizer impregnation is prohibited. No more than 500 tons of bulk fertilizer can be impregnated per day. No single facility may impregnate fertilizer with this product for more than 30 days per calendar year.

## WEEDS CONTROLLED

### F9316-2 Alone

When used as directed, F9316-2 will provide preemergence control/suppression of the weeds in the following Table 1. For postemergence weed control, see the list of weeds in Table 6 when the product is applied alone. F9316-2 only controls certain broadleaf weeds post after they emerge. Weeds larger than the size indicated in Table 6 may only be partially controlled.

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

<b>Annual Grasses Controlled</b>	
Barley, little	<i>Hordeum leporium</i>
Barnyardgrass	<i>Echinochloa crus-galli</i>
Broadleaf signalgrass	<i>Brachiaria platyphylla</i>
Bluegrass, annual	<i>Poa annua</i>
Crabgrass, large	<i>Digitaria sanguinalis</i>
Canarygrass	<i>Phalaris canariensis</i>
Crabgrass, smooth	<i>Digitaria ischaemum</i>
Cupgrass, southwestern	<i>Erichloa glacialis</i>
Crowfootgrass	<i>Dactyloctenium aegyptium</i>
Foxtail, giant	<i>Setaria faberi</i>
Foxtail, green	<i>Setaria viridis</i>
Foxtail, yellow	<i>Setaria glauca</i>
Foxtail, bristly	<i>Setaria verticillata</i>
Goosegrass	<i>Eleusine indica</i>
Johnsongrass (seedling)	<i>Sorghum halepense</i>
Panicum, fall	<i>Panicum dichotomiflorum</i>
Panicum, Texas	<i>Panicum texanum</i>
Red Rice	<i>Oryza punctata</i>
Ryegrass, Italian	<i>Lolium multiflorum</i>
Ryegrass, rigid	<i>Lolium rigidum</i>

Witchgrass	<i>Panicum capillare</i>
<b>Annual Grasses Suppressed<sup>1</sup></b>	
Brome downy	<i>Bromus tectorum</i>
Brome, Japanese	<i>Bromus japonicas</i>
Cheat	<i>Bromus secalinus</i>
Cupgrass, woolley	<i>Eriochloa villosa</i>
Oat, wild	<i>Avena fatua</i>
Sandbur, longspine	<i>Cenchrus longispinuss</i>
Shattercane	<i>Sorghum vulgare</i>
Millet, wild proso	<i>Panicum miliaceum</i>

<b>Annual Broadleaves Controlled</b>	
Amaranth, Palmer	<i>Amaranthus palmeri</i>
Amaranth, Powell	<i>Amaranthus powellii</i>
Carpetweed	<i>Mollugo verticillata</i>
Chickweed	<i>Stellaria media</i>
Kochia (non-Triazine Resistant) control	<i>Kochia scoparia</i>
Lambsquarters, common	<i>Chenopodium album</i>
Jimsonweed	<i>Datura stramonium</i>
Hairy galinsoda	<i>Galinsoga quadriradiata</i>
Henbit	<i>Lamium amplexicaule</i>
Ladysthumb	<i>Polygonum persicaria</i>
Nightshade, black	<i>Solanum nigrum</i>
Nightshade, hairy	<i>Solanum physalifolium</i>
Nightshade, Eastern black	<i>Solanum ptycanthum</i>
Mustards	<i>Sinapis species</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>

Pigweed, tumble	<i>Amaranthus albus</i>
Purple deadnettle	<i>Lamium purpureum</i>
Purslane, common	<i>Portulaca oleracea</i>
Pusley, Florida	<i>Richardia scabra</i>
Ragweed, common <sup>1</sup>	<i>Ambrosia artemisiifolia</i>
Spreading orach	<i>Atriplex subspicata</i>
Sida, prickly (Teaweed)	<i>Sida spinosa</i>
Smartweed, Pennsylvania	<i>Polygonum pensylvanicum</i>
Waterhemp, common	<i>Amaranthus rudis</i>
Waterhemp, tall	<i>Amaranthus tuberculatos</i>
<b>Annual Broadleaves Suppressed<sup>1</sup></b>	
Buckwheat, wild	<i>Polygonum convolvulus</i>
Cocklebur, common	<i>Xanthium pennsylvanicum</i> , <i>Xanthium strumarium</i>
Ragweed, giant	<i>Ambrosia trifida</i>
Groundsel, common	<i>Senecio media</i>
Kochia (Triazine Resistant)	<i>Kochia scoparia</i>
Hairy fleabane	<i>Conyza bonariensis</i>
Horseweed (maretail)	<i>Conyza canadensis</i>
Morningglory, entireleaf	<i>Ipomoea hederacea integruscula</i>
Morningglory, ivyleaf	<i>Ipomoea hederacea</i>
Morningglory, pitted	<i>Ipomoea lacunosa</i>
Russian thistle	<i>Salsola iberica</i>
Sicklepod	<i>Senna obtusifolia</i>
Velvetleaf	<i>Abutilon theophrasti</i>
<b>SEDGES</b>	
Nutsedge, yellow	<i>Cyperus esculentus</i>

<sup>1</sup> Partial control (light gray) or suppression only. F9316-2 should be used in tank mixes or use sequential applications with other herbicides for best results.



## **CORN (Field, Sweet, Pop and Seed) SPECIFIC USE DIRECTIONS**

### **Fall Applications for controlling weeds germinating the following spring**

F9316-2 may be applied in the fall to control weeds in conventional, minimum tillage, or no-till corn production systems planted the following spring. This fall application program will typically need to be followed with a suitable in-season postemergence herbicide treatment to provide season long control of the complete target weed spectrum.

### **Fall Applications for controlling weeds germinating in the fall or winter annual weeds**

F9316-2 may be applied in the fall for burndown and residual control. For control of emerged weeds in the fall use combinations with other burndown herbicides like Aim, 2,4-D, 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 F9316-2) is used the maximum combined rate of F9316-2 must not exceed 70.5 fl. oz. /A for fine and medium soils. Do not exceed 2 inch incorporation depth if tilled after application to maintain sufficient herbicide barrier in the weed germination zone. Use the highest rate within soil type. F9316-2 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 Application Restrictions**

- Fall applications must be made after October 1.
- Do not apply to frozen or snow covered soil.
- Do not make fall applications on coarse soils.

#### On medium and fine textured soils:

- Do not apply more than 58.5 fl. oz/acre per application.
- Do not exceed 70.5 fl. oz/acre from all sequential applications. (Fall, preplant / preemergence, or early postemergence).

**Preplant, preemergence and early preplant applications:**

F9316-2 may be applied prior to planting up to crop emergence. Apply F9316-2 alone or in tank mixtures, up to 45 days before planting. When sprayed at early preplant (15-45 days prior to planting), use the highest rate listed for the specific soil texture. 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 of additional weed control methods such as tank mixes with an appropriate postemergence herbicide(s) to control emerged weeds may be necessary.

**Preplant incorporated (PPI) applications:**

For PPI applications of F9316-2 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.

**Precaution:**

- Preplant surface applications on coarse soils being planted to popcorn or sweet corn may cause crop injury in certain varieties. Before making applications of this product, consult with your local seed supplier or agricultural extension office for specific cultural practice suggestions.

**Early Post Emergence Applications:**

In corn, apply F9316-2 from crop emergence up to 12 inches tall. The amount of F9316-2 to apply and the degree of weed control resulting from a F9316-2 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 stressful growing conditions (i.e. saturated soils, cold temperatures, slow growth periods, etc) the crop may experience higher risk for temporary crop response. The crop will rapidly outgrow these effects and develop normally with no reduction in yield.

Before applying to corn, verification of F9316-2 selectivity on your inbred line or hybrid line must be confirmed with your local seed company or supplier to avoid injury to sensitive inbred lines or hybrids.

**Precautions for Post Emergence Applications:**

1. If applying F9316-2 post emergence, avoid applications when crop foliage is wet due to heavy dew, rain, or irrigation moisture. If F9316-2 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. Rainfall or irrigation within 1 hour may wash F9316-2 off of the weeds during this period and may reduce post emergence performance.

**Restrictions for Preplant /Preemergence and Postemergence Applications to Corn:**On Coarse Textured Soils:

- Do not make preplant surface applications in areas where average annual rainfall (or rainfall + irrigation) typically exceeds 40 inches.
- Do not apply more than 2 weeks ahead of planting.
- Do not apply more than 38.5 fl. oz/acre per application.
- Do not exceed 38.5 fl. oz/acre per year from all sequential applications (fall burndown, preplant/preemergence, and early post).

On Medium and Fine Soils:

- Do not apply more than 58.5 fl oz/acre per application.
- Do not exceed 70.5 fl. oz/acre per year from all sequential applications (fall burndown, preplant/preemergence, and early post).

On All Soil Types:

- Postemergence applications can be made from emergence to 12 inches tall.
- Do not make more than 1 preplant/preemergence application per year.

Pre-Harvest Intervals (PHI):

- Field Corn: Do not harvest forage within 60 days or grain and fodder less than 70 days after the last application.
- Sweet Corn: Do not harvest forage or sweet corn ears for human consumption less than 45 days after the last application.
- Popcorn: Do not harvest grain or fodder less than 70 days after the last application.

### **Sequential applications**

F9316-2 can be applied in sequential programs, but do not exceed the maximum use rate per cropping season. Where weeds are emerged use appropriate tank mixtures for control of the weed species present.

F9316-2 may be used following an earlier application of F9310-6 herbicide during the same cropping season. When F9316-2 is applied to the soil, it may be followed with F9310-6 herbicide. See the F9310-6 label for the use rates and use directions.

### **F9316-2 in Tank Mixtures**

For enhanced control of emerged weeds use in combination with other burndown herbicides like Aim, 2,4-D, glyphosate, paraquat, glufosinate and products containing saflufenacil (e.g. Sharpen, Verdict). Saflufenacil may be applied prior to planting at any time in combination with F9316-2.

F9316-2 may be applied pre and post emergence with glufosinate or glyphosate based products, or other pre and postemergence broadleaf herbicides approved for use on corn. Tank mixing F9316-2 with other postemergence herbicides may increase the speed of activity and provide control of the weeds listed in Table 6. F9316-2 will provide enhanced control or suppression of other weeds such as ragweeds and marestalk. F9316-2 may be tank-mixed with insecticides such as Hero™, or Mustang Max™ and with fungicides. Some populations of weeds may be tolerant or resistant to glyphosate based herbicides. Applying F9316-2 in a tank-mix with glyphosate on resistant weeds larger than specified in Table 2 may result in unsatisfactory control. Other herbicides in tank-mix with F9316-2 or separately may be required to achieve adequate control of these resistant biotypes. Follow all directions, restrictions and precautions for each product in the tank mixture.

## **ATRAZINE APPLICATION RESTRICTIONS:**

### **FOR ALL SOIL APPLICATIONS PRIOR TO CROP EMERGENCE**

#### **On Highly Erodible land (as defined by the Natural Resource Conservation Service)**

- If conservation tillage is practiced, leaving at least 30% of the soil covering with plant residues at planting, apply a maximum of 2 lbs. of atrazine/A as a broadcast spray.
- If soil coverage with plant residue is less than 30% at planting, a maximum of 1.6 lbs. of atrazine/A may be applied.

#### **On Land Not Highly Erodible**

Apply a maximum of 2 lbs. of atrazine/A as a broadcast spray.

### **FOR POSTEMERGENCE APPLICATIONS TO CORN**

If no atrazine was applied prior to corn emergence, a maximum of 2 lbs. ai /A of atrazine may be applied postemergence. If a postemergence treatment is required following an earlier herbicide application containing atrazine, the total atrazine applied may not exceed 2.5 lbs. ai per acre per calendar year.

For all tank mixtures and sequential treatment of products containing atrazine, the total lbs a.i. of atrazine applied cannot exceed 2.5 lbs. active ingredient per year.

Note that this product, applied at the maximum single use rate (for all soil types except course), of 58.5 fl. oz/acre will deliver 1.83 lbs. atrazine/A.

On course soils, the maximum single application rate is 38.5 fl. oz/acre, which will deliver 1.2 lbs. atrazine/A.

## **SOIL TEXTURE**

Unless a specific soil texture is mentioned, the 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.**

<b>Coarse</b>	<b>Medium</b>	<b>Fine</b>
Sand	Loam	Sandy clay
Loamy sand	Silt loam	Silty clay loam
Sandy Loam	Sandy clay loam	Silty clay
	Silt	Clay loam
		Clay

## **Corn: Rate Tables**

### **EARLY PREPLANT**

**Table 3. F9316-2 application more than 14 days prior to planting.**

<b>Coarse</b>	<b>Medium</b>	<b>Fine</b>
Do Not Apply	2-2.75 pts 1.126 - 1.549 lb ai/A	2.5-3.66 pts 1.408-2.06 lb ai/A

### **PREPLANT / PREEMERGENCE APPLICATION RATES**

**Table 4. F9316-2 application less than 14 days before planting.**

<b>Organic Matter</b>	<b>Coarse</b>	<b>Medium</b>	<b>Fine</b>
Less than 3%	1.5-2 pts	1.75-2.5 pts	2-3 pts
	0.845-1.126 lb ai/A	0.985-1.408 lb ai/A	1.126-1.689 lb ai/A
Greater than 3%	1.75- 2.0pt	2-2.75 pt	2.25-3.66 pts
	0.985-1.267 lb ai/A	1.126-1.549 lb ai/A	1.267-2.06 lb ai/A

- Use rates listed above are for control or suppression of weeds listed in section 19 with F9316-2 or F9316-2 tankmixes.
- For early preplant applications and/or in reduce tillage (i.e. no-till/ high residue) systems or heavy weed pressures use the higher labeled rate by the soil type.
- For fine textured soils with organic matter >3% use up to 3.66pts/A.
- Corn seed must be planted a minimum of 1.5 inches deep. Shallow planting can lead to increased crop response risk.

A preemergence tankmix or sequential application of a postemergence herbicide may be necessary for some weeds.

For control of additional weed species, F9316-2 may be used in combination with other labeled corn herbicides for increased weed control including but not limited to:

Product	Weed species
Isoxaflutole : (Balance Flexx)	Velvetleaf, Kochia, Lambsquarters
Atrazine	Cocklebur, Giant ragweed, Kochia (non-triazine resistant) Morningglory
Clorpyralid + flumesulam: (Hornet)	Cocklebur, Giant ragweed, Sunflower, Velvetleaf

## POSTEMERGENCE APPLICATION RATES

**Table 5.**

Coarse	Medium	Fine
1.5-2.0 pt 0.849-1.126 lb ai/A	1.75-2.25 pt 0.985-1.267 lb ai/A	2 -3.66 pt 1.126-2.06 lb ai/A

- Use rates listed above are for residual control on the weed control list.
- For heavy weed densities and longer residual use the higher labeled rate by the soil type.
- Applications to weeds larger than specified in table 6 can result in unsatisfactory control.

**Table 6. Post Broadleaf Weed Control – Maximum Weed Height for F9316-2 Applied Alone**

Weed Species	Maximum ht (in)	
	2 pt/A 1.126 lb ai/A	3 pt/A 1.689 lb ai/A
Anoda, spurred ( <i>Anoda cristata</i> )	2	4
Burcucumber ( <i>Sicyos angulatus</i> )	2	3
Dayflower, spreading ( <i>Commelina diffusa</i> )	2	3
Jimsonweed ( <i>Datura stramonium</i> )	3	4
Kochia ( <i>Kochia scoparia</i> )	2	3
Lambsquarters, common ( <i>Chenopodium album</i> )	2	4
Morningglory, annual ( <i>Ipomea</i> spp.)	2	4
Nightshade, black ( <i>Solanum nigrum</i> )	3	4
Nightshade, Eastern black ( <i>S. ptycanthum</i> )	3	4
Pigweed, redroot ( <i>Amaranthus retroflexus</i> )	3	4

Pigweed, smooth ( <i>A. hybridus</i> )	3	4
Pigweed, spiny ( <i>A. spinosus</i> )	3	4
Russian thistle	2	3
Smartweed, Pennsylvania ( <i>Polygonum pennsylvanicum</i> )	2	4
Velvetleaf ( <i>Abutilon theophrasti</i> )	36	36
Waterhemp, common ( <i>Amaranthus rudis</i> )	3	4
Waterhemp, tall ( <i>A. tuberculatus</i> )	3	4
Wild Buckwheat ( <i>Polygonum convolvulus</i> )	2*	3

\*Partial control or suppression

## SPRAY DRIFT MANAGEMENT

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

F9316-2 contains a contact protoporphyrinogen oxidase (PPO) inhibitor herbicide. Avoid any drift conditions that would allow the product to contact desirable vegetation. F9316-2 is not volatile, however; 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 these factors involved in minimizing drift potential when making decisions.

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



to very coarse size categories as defined in the August 1999 ASAE S572 publication entitled, "Spray Nozzle Classification by Drop Spectra". Refer to that publication for additional information. For aerial application, low drift or straight stream nozzles that deliver coarse to very coarse droplets are required. 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 F9316-2 spray clouds should 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 manufacture'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.

**Nozzle Type** - Use a low drift nozzle type that is designed for the intended application. Do not use nozzles that produce fine or very fine spray droplets (e.g. cone). **Ground Boom Application Height**- Do not make applications 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 Application Height** – Apply at a height of 10 ft or less above the crop canopy unless aircraft safety is compromised. Applicators must follow the most restrictive use cautions to avoid drift hazards, including those on this label as well as state and local regulations.

**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. Do not ~~to~~ apply F9316-2 when wind speed exceeds 15 mph. NOTE: Local terrain can influence wind patterns. Every applicator shall 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 should remain within the medium droplet size category. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions** – Do not apply 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** – F9316-2 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). Avoid potential adverse effects to non-target areas by maintaining a 30-ft. buffer between the application area and the closest downwind edge of sensitive terrestrial habitats ( such as grasslands, forested areas, shelter belts, woodlots, hedge rows, riparian areas, shrublands, and crop lands).

Maintain a 66-ft. buffer at points where field surface water runoff enters perennial or intermittent streams or rivers and 200-ft buffer around natural or impounded lakes and reservoirs.

## **CLEANING SPRAY EQUIPMENT**

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 F9316-2 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 F9316-2ATZ as required on the other product labels. More complete cleaning can be achieved if the spray system is cleaned immediately following the application.

1. Drain sprayer tank, hoses, spray boom and spray nozzles. Use a high-pressure detergent wash to remove physical sediment and residues from the inside of the sprayer tank and thoroughly rinse. Then, thoroughly flush sprayer hoses spray boom and spray nozzles with a clean water rinse. Remove and clean spray tips and all filters and screens (tank, spray hose and spray tips) separately in the ammonia solution of Step 2.

2. Next, prepare a sprayer cleaning solution by adding three gallons of ammonia (containing at least 3% active) per 100 gallons of clean water. Prepare sufficient cleaning solution to allow the operation of the spray system for a minimum of 15 minutes to thoroughly flush hoses, spray boom and spray nozzles.

3. Convenient and thorough cleaning of the sprayer can be achieved if the ammonia solution or fresh water is left in the spray tank, hoses, spray booms and spray nozzles overnight or during storage.

4. Before using the sprayer, completely drain the sprayer system. Rinse the tank with clean water and flush through the hoses, spray boom, and spray nozzles with clean water.

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

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

Do not store the sprayer overnight or for any extended period of time with F9316-2 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 F9316-2 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. To the extent consistent with applicable law FMC accepts no liability for any effects due to inadequately cleaned equipment.

When F9316-2 has been tank mixed refer to the label of the product used previously or tank mixed with F9316-2 for any additional cleaning instructions.

## **REPLANTING INSTRUCTIONS**

If corn treated with F9316-2 is lost due to a natural catastrophe such as hail or frost, only corn 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 F9316-2.

## ROTATIONAL CROPS

For rotational crop restrictions when F9316-2 is used in tank mixtures or sequentially with other products, refer to the rotation intervals on the other product label for possible additional restrictions.

For all uses do not rotate to any crop except corn until the following year, or injury may occur. In the following year, rotation to these crops ( soybeans, cotton, grain sorghum , and peanuts) can occur if the following conditions are observed: (1) If applied after June 10, do not rotate with crops other than corn, grain sorghum the next year or crop injury may occur. (2) In the High Plains, and Intermountain areas of the West, where rainfall is sparse and erratic or where irrigation is required, use only when corn or grain sorghum is to follow corn or a crop of untreated corn is to precede other rotational crops. (3) In eastern parts of the Dakotas, KS, western MN, and NE, do not rotate to soybeans for 18 months if the rate applied to corn was more than 64 oz/ of Anthem ATZ (2 lbs. a.i. of atrazine) or equivalent band application rate or soybean injury may occur. (4) Injury may occur to soybeans planted the year following application on soils having a calcareous surface layer. (5) Do not plant tobacco, vegetables (including dry beans), spring-seeded small grains, or small seeded legumes and grasses the year following application, or injury may occur. (6) Do not apply to grasses grown for seed for 18 months. (7) Do not plant small grains (other than winter wheat) for 18 months if 56 oz/A or more of Anthem ATZ is used (1.75 lbs a.i. of atrazine). (8) Do not plant sugarbeets for 15 months. (9) Do not plant rice for 18 months, if 42 oz/A or more of Anthem ATZ (1.3 lbs a.i. of atrazine) is used and for 24 months if 56 oz/A or more of Anthem ATZ (1.75 lbs of atrazine) is used. (10) For all others crops not listed above the rotational crop interval is 18 months.

If treated crop is lost due crop conditions or weather related events, corn may be replanted. Corn may be planted the spring following treatment.

## **LABEL TRACKING INFORMATION**

Label Code: 04-28-15 Master Rotations

Replaces Label Code: 12-15-14

EPA Approval Date:

FMC Corporation

Agricultural Products Group

1735 Market Street

Philadelphia PA 19103

215-299-6000

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