**Net Content:** 

For control of certain grasses and broadleaf weeds in Cotton and Soybeans.

#### **ACTIVE INGREDIENTS:**

Metolachlor	46.4%
Fomesafen (in the form of sodium salt)	10.2%
OTHER INGREDIENTS:	43.4%
TOTAL:	100.0%
This product contains 4.24 pounds of Motolophlar and 0.05 pound of E	omooofon

This product contains 4.34 pounds of Metolachlor and 0.95 pound of Fomesafen active ingredients per gallon.

# KEEP OUT OF REACH OF CHILDREN ANGER / PELIGR

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

[See FIRST AID Below] [See Side (Back) Panel for FIRST AID]; [See Page for FIRST AID] [See Container Labeling for (FIRST AID and) **Complete Directions for Use1** [See (Attached) Booklet (Container Labeling) for **Complete Directions for Use**]

EPA Reg. No. 19713-677 EPA Est. No. 19713-XX-X 2.5 Gals. (9.46 L)

# **FIRST AID**

# IF IN EYES:

- Hold eve open and rinse slowly and gently with water for 15 to 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 SWALLOWED:

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

#### IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- · Rinse skin immediately with plenty of water for 15 to 20 minutes.
- · 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.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also call CHEMTREC at 800-424-9300 for emergency medical treatment information

NOTE TO PHYSICIAN: For exposure to eyes, symptomology may include corneal and iris involvement with full recovery expected. Probable mucosal damage may contraindicate the use of gastric lavage.

### PRECAUTIONARY STATEMENTS

#### Hazards to Humans and Domestic Animals

DANGER: Corrosive. Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing. May cause skin sensitization reactions in some people.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders applicators and other handlers must wear: Coveralls over short-sleeved shirt and short pants, chemical-resistant gloves made of barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyethylene, PVC or viton, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure, protective eyewear (goggles or face shield) and chemical-resistant apron when cleaning equipment, mixing or loading.

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

Mixers and loaders supporting aerial applications are required to use closed systems. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6). When using the closed system, the mixers and loaders PPE requirements may be reduced or modified as specified in the WPS.

#### **ENGINEERING CONTROLS**

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

#### **USER SAFETY RECOMMENDATIONS**

Users should: 1) Wash hands thoroughly before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing/ PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

# **ENVIRONMENTAL HAZARDS**

Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated area. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Do not apply when weather conditions favor drift from target area.

# Reporting Ecological Incidents:

To report ecological incidents, including mortality, injury, or harm to plants and animals, call 1-901-774-4370.



UP-FRONT and the DREXEL logo are either trademarks or registered trademarks of Drexel Chemical Company

#### **GROUNDWATER ADVISORY**

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

#### SURFACE WATER ADVISORY

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several weeks or months 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 Metolachlor and Fomesafen from runoff water and sediment. Runoff of this product will be reduced by avoiding application when rainfall or irrigation is expected to occur within 48 hours. For more information, see the United States Department of Agriculture National Resource Conservational Service's manual, "Conservation Buffers to Reduce Pesticide Losses."

#### MIXING/LOADING INSTRUCTIONS

Care must be taken when using this product to prevent back siphoning into wells, spills or improper disposal of excess pesticide spray mixtures or rinsates. Check-valves or anti-siphoning devices must be used on all mixing and/or irrigation equipment. This product may not be mixed or loaded within 50 feet of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be mixed/loaded or used within 50 feet of all wells, including abandoned wells, drainage wells and sink holes. Operations that involve mixing, loading, rinsing or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater and rain water 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-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

# **NON-TARGET ORGANISMS ADVISORY STATEMENT**

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

### **DIRECTIONS FOR USE**

#### **ENDANGERED SPECIES PROTECTION REQUIREMENTS:**

It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g. kill or otherwise harm) of an endangered species and certain threatened species, under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult <a href="http://www.epa/gov/espp/">http://www.epa/gov/espp/</a>, call 1-844-447-3813, or email <a href="mailto:ESPP@epa.gov">ESPP@epa.gov</a>. You must use the Bulletin valid for the month in which you will apply the product.

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe consult the agency responsible for pesticide regulation.

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS) 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

**Exception:** If the product is soil-injected or soil-incorporated, the WPS under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated. For early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water wear: Coveralls over short-sleeved shirt and short pants, chemical-resistant gloves made of barrier laminate, nitrile rubber, neoprene rubber, polyethylene, PVC or viton, chemical-resistant footwear plus socks and protective eyewear (goggles or face shield).

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

NOTE: NOT FOR SALE, USE OR DISTRIBUTION IN NASSAU COUNTY OR SUFFOLK COUNTY, NEW YORK

# HERBICIDE RESISTANCE MANAGEMENT

FOMESAFEN GROUP 14 HERBICIDE

Restricted Entry Interval (REI) of 24 hours.

# METOLACHLOR GROUP 15 HERBICIDE

For resistance management, this product is a Group 14 and Group 15 modes of action herbicides. Any weed population may contain or develop plants naturally resistant to this product and other Group 14 and Group 15 modes of action herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

To delay herbicide resistance, take one or more of the following steps:
• Rotate the use of this product or other Group 14 and Group 15

- Rotate the use of this product or other Group 14 and Group 15 modes of action herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank-mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistanceprone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of noncontrolled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.

• For further information or to report suspected resistance, contact Drexel Chemical Company representatives at (901) 774-4370.

#### PRODUCT INFORMATION

UP-FRONT is a selective herbicide for the control or partial control of labeled grass, broadleaf and sedge weeds in Cotton and Soybeans. Metolachlor and Fomesafen herbicides may be applied as a pre-plant surface, pre-plant incorporated, pre-emergence or post-emergence treatment

This product is a mixture of the active ingredients, Metolachlor and Fomesafen. Metolachlor is a biosynthesis inhibitor (Group 15 mode of action) preventing cell division in emerging weeds. Fomesafen is a protoporphyrmogen oxidase inhibitor (Group 14 mode of action) leading to cellular membrane disruption and plant death.

#### MIXING INSTRUCTIONS

Do not prepare more spray mixture than is needed for the immediate operation. Thoroughly clean the spray equipment before using this product. Vigorous agitation is necessary to maintain uniformity of the spray mixture. Maintain maximum agitation throughout the spraying operation. Do not allow spray mixture to stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area.

# APPLICATION IN WATER OR FLUID FERTILIZERS THIS PRODUCT ALONE:

Add one-third of the required amount of water or fluid fertilizer to the spray or mixing tank. With the agitator running, add this product into the spray tank. Continue agitation while adding the remainder of the water or fluid fertilizer. Begin application of the spray solution after this product has completely dispersed in the water or fluid fertilizer. Maintain agitation until all of the mixture has been applied.

#### **TANK-MIXTURES\*:**

Add one-third of the required amount of water or fluid fertilizer to the mix tank. Start the agitator running before adding any tank-mix partners. In general, tank-mix partners should be added in this order: products packaged in water-soluble packaging, wettable powders, wettable granules (dry flowables), liquid flowables, liquid such as this product and emulsifiable concentrates. Always allow each tank-mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water. Maintain agitation until all of the mixture has been applied.

Note: (1) When using this product in tank-mixtures, all products in water-soluble packaging should be added to the tank and mixed with plain water before any other tank-mix partner, including this product. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank-mix partner to the tank. (2) Water-soluble packets will not properly dissolve in most spray solutions that contain fluid fertilizers.

\*If using this product in a tank-mixture, observe the most restrictive of all directions for use, crop/sites, use rates, dilution ratios, precautions and limitations that appear on the tank-mix product label. Do not exceed labeled dosage rates for any product and follow the most restrictive label precautions and limitations of all products mixed. This product is compatible with most common tank-mix partners. However, the physical compatibility of this product with tank-mix partners should be tested before use. To determine the physical compatibility of this product with other products, use a jar test, as described below.

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank-mixture.

**Note:** Do not use nitrogen solutions or fluid fertilizers as a complete or partial spray carrier when applying this product as a post-emergence application to Soybeans as these combinations may cause crop injury.

#### **COMPATIBILITY TEST:**

A jar test is recommended before tank-mixing to ensure compatibility of this product with other pesticides. The following test assumes a spray volume of 25 gallons per acre. For other spray volumes, make appropriate changes in the ingredients.

**Note:** Nitrogen solutions or complete fluid fertilizers may replace all or part of the water in the spray for pre-plant surface, pre-plant incorporated or pre-emergence applications only. Because liquid fertilizers vary, even within the same analysis, always check compatibility with pesticide(s) before use. Incompatibility of tank-mixtures is more common with suspensions of fertilizer and pesticides.

#### Test Procedure:

- Add 1 pint of carrier (fertilizer or water) to each of 2 one-quart jars with tight lids. Note: Use the same source of water that will be used for the tank-mix and conduct the test at the temperature the tankmix will be applied
- To one of the jars, add one-fourth teaspoonful or 1.2 milliliters of a compatibility agent approved for this use (one-fourth tsp. is equivalent to 2 pts./100 gals. spray). Shake or stir gently to mix.
- 3. To both jars, add the appropriate amount of pesticide(s) in their relative proportions based on specified label rates. If more than one pesticide is used, add them separately with dry pesticides first, flowables next and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix.
- 4. After adding all ingredients, put lids on and tighten and invert each jar ten times to mix. Let the mixtures stand 15 to 30 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (a) Slurry the dry pesticide(s) in water before addition or (b) add one-half of the compatibility agent to the fertilizer or water and the other one-half to the emulsifiable concentrate or flowable pesticide before addition to the mixture. If incompatibility is still observed, do not use the mixture.
- After compatibility testing is complete, dispose of any pesticide wastes in accordance with the "STORAGE AND DISPOSAL" section in this label

# APPLICATION DIRECTIONS ACTIVATION

A small amount of soil moisture is required to activate this product following application. In areas of low rainfall, a pre-emergence application to dry soil should be followed with light irrigation of 0.25 to 0.5 inch of water. As with many surface applied herbicides, weed control and crop tolerance may vary with rainfall and/or soil texture. If rainfall or irrigation within 7 to 10 days does not occur, cultivate uniformly with shallow tilling equipment such as a rotary hoe that will not damage Soybeans.

### **GROUND SPRAY EQUIPMENT**

Apply this product alone or in tank-mixtures by ground equipment in a minimum of 10 gallons of spray mixture per acre, unless otherwise specified

Use sprayers that provide accurate and uniform application. Calibrate the sprayer before use at the beginning of the season. For mixtures with wettable powder or dry flowable formulations, screens and strainers should be no finer than 50 mesh.

## **BAND APPLICATIONS**

Calculate the amount of herbicide needed for band treatment by the formula:

 $\frac{\text{Band width in inches}}{\text{Row width in inches}} \quad \text{x} \quad \frac{\text{Broadcast rate}}{\text{per acre}} = \frac{\text{Amount needed}}{\text{per acre of field}}$ 

# **CHEMIGATION**

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

#### **AERIAL APPLICATION**

Apply this product in water using a minimum spray volume of 5 gallons per acre. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. Make applications at a maximum height of 10 feet above the Soybeans with low drift nozzles at a maximum pressure of 40 psi.

Avoid application to humans or animals. Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin.

#### MANDATORY SPRAY DRIFT MANAGEMENT

#### **GROUND BOOM APPLICATIONS:**

- Do not release spray at a height greater than 3 ft. above the ground or crop canopy unless making a turf, pasture, or rangeland application, in which case do not release spray at a height greater than 4 ft. above the ground or crop canopy.
- Applicators are required to select the nozzles and pressure that deliver medium or coarser droplets (ASABE S572).
- Do not apply when wind speeds exceed 15 mph at the application site.
- Do not apply during temperature inversions.

#### **BOOMLESS GROUND APPLICATIONS:**

- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplet size (ASABE S572.3) for all applications.
- Do not apply when wind speeds exceed 15 mph at the application site
- · Do not apply during temperature inversions.

#### **AERIAL APPLICATIONS:**

- Do not release spray at a height greater than 10 ft. above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a coarse or coarser droplets in accordance with American Society of Agricultural and Biological Engineers Standard 641 (ASABE S641).
- For all other applications, applicators must select the nozzle and pressure that deliver medium or coarser droplets (ASABE S641).
   If the wind speed is 10 mph or less, applicators must use one-half swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 10 mph at the application site.
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Do not apply during temperature inversions

#### **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### IMPORTANCE OF DROPLET SIZE

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

# Controlling Droplet Size - Ground Boom

Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.

Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

# Controlling Droplet Size - Aircraft

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

#### **BOOM HEIGHT - Ground Boom**

For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### **RELEASE HEIGHT - Aircraft**

Higher release heights increase the potential for spray drift.

#### SHIELDED SPRAYERS

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

### **TEMPERATURE AND HUMIDITY**

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

#### **TEMPERATURE INVERSIONS**

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

#### WIND

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

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

#### **BOOMLESS GROUND APPLICATIONS**

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

#### HANDHELD TECHNOLOGY APPLICATIONS

Take precautions to minimize spray drift.

# TO PREVENT OFF SITE MOVEMENT DUE TO RUNOFF OR WIND EROSION

- Avoid treating powdery dry or light sand soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.
- Do not apply to impervious substrates such as paved or highly compacted surfaces.
- Do not use tail water from the first flood or furrow irrigation of treated fields to treat non-target crops, unless at least 0.5 inch of rainfall has occurred between application and the first irrigation.

### **CLEANING EQUIPMENT AFTER APPLICATION**

Because some crops other than Soybeans are sensitive to low rates of this product, special attention must be given to cleaning equipment before spraying a crop other than those registered for use and on this label. Mix only as much spray solution as needed. Immediately after spraying, clean equipment thoroughly using the following procedure:

- 1. Flush tank, hoses, boom and nozzles with clean water.
- 2. Prepare a cleaning solution of 1 gallon of household ammonia per 50 gallons of water. Many commercial spray tank cleaners may be used as well. Consult your representative for a partial listing of approved tank cleaners and more information about proper tank cleaning procedures. Do not use chlorine based cleaners such as Clorox<sup>®</sup>.
- 3. When available, use a pressure washer to clean the inside of the spray tank with this solution. Take care to wash all parts of the tank including the inside top surface. Completely fill the sprayer with the cleaning solution to ensure contact of the cleaning solution with all internal surfaces of the tank and plumbing. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
- 4. Flush hoses, spray lines and nozzles for at least one minute with the cleaning solution.
- 5. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Do not apply when weather conditions favor drift from target area.
- 6. Repeat steps 2 and 5.
- Remove nozzles, screens, diaphragm check valves and strainers and clean separately in the ammonia cleaning solution after completing the above procedures.
- 8. Rinse the complete spraying system with clean water.

#### **USE PRECAUTION**

 Avoid overlapping spray swaths as injury may occur to rotational crops.

#### **USE RESTRICTIONS**

- A maximum of 3 pints of this product (or a maximum of 0.375 lb. a.i./Ac. of Fomesafen from any product containing Fomesafen) may be applied per acre per year in Region 1 (see "REGIONAL USE MAP").
- A maximum of 3 pints of this product (or a maximum of 0.375 lb. a.i./Ac. of Fomesafen from any product containing Fomesafen) may be applied per acre in ALTERNATE years in Region 2 (see "REGIONAL USE MAP").

- A maximum of 2.5 pints of this product (or a maximum of 0.313 lb. a.i./Ac. of Fomesafen from any product containing Fomesafen) may be applied per acre in ALTERNATE years in Region 3 (see "REGIONAL USE MAP").
- A maximum of 2 pints of this product (or a maximum of 0.25 lb. a.i./Ac. of Fomesafen from any product containing Fomesafen) may be applied per acre in ALTERNATE years in Region 4 (see "REGIONAL USE MAP").
- · Do not graze treated areas or harvest for forage or hay.
- Do not exceed 2.75 pounds active ingredient per acre per year of Metolachlor from applications of this product or any other Metolachlor containing products.

# USE RATES AND WEEDS CONTROLLED REGIONAL USE MAP



REGION 1 (Maximum Rate: 3 pts. / Ac. per year)



**REGION 1:** Includes the following states or portion of states where this product may be applied: Alabama, Arkansas, Florida (except Miami Dade County), Georgia, Louisiana, Mississippi, Missouri (counties of Bollinger, Butler, Cape Girardeau, Dunklin, Madison, Mississippi, New Madrid, Pemiscot, Perry, Ripley, Scott, Stoddard and Wayne), North Carolina, Oklahoma (east of U.S. Highway 75 and east of Indian Nation Parkway), South Carolina, Tennessee and Texas (includes area east of U.S. Highway 77 to State Road 239 including all of Calhoun County).

REGION 2 (Maximum Rate: 3 pts. / Ac., alternate years)



**REGION 2:** Includes the following states or portion of states where this product may be applied: Delaware, Kentucky, Maryland, Virginia, West Virginia, south of Interstate 70 in the following states: Illinois, Indiana and Ohio and all areas south of Interstate 80 to the intersection of U.S. Highway 15 and east of U.S. Highway 15 and U.S. Highway 522 in Pennsylvania.

# REGION 3 (Maximum Rate: 2.5 pts. / Ac.. alternate vears)



**REGION 3:** Includes the following states or portion of states where this product may be applied: Connecticut, Iowa, Maine, Massachusetts, Missouri (all counties except for those listed in Region 1), New Hampshire, New Jersey, New York, Pennsylvania (all areas except those listed in Region 2), Rhode Island, Vermont and Wisconsin (south of U.S. Highway 18 between Prairie Du Chien and Madison and south of Interstate 94 between Madison and Milwaukee) and north of Interstate 70 in the following states: Indiana, Illinois and Ohio.

REGION 4 (Maximum Rate: 2 pts. / Ac., alternate years)



**REGION 4:** Includes the following states or portion of states where this product may be applied: Kansas (all counties east of or intersected by U.S. Highway 281), Michigan (Southern Peninsula) Minnesota (all areas south of Interstate 94), Nebraska (all counties east of or intersected by U.S. Highway 281) and Wisconsin (all areas except those in Region 3 south of Interstate 94 from Minnesota state line to Eau Claire and south of U.S. Highway 29 from Eau Claire to Green Bay plus Door and Kewaunee counties. The following counties are excluded: Clark, Marathon, Wood, Portage, Adams, Shawano, Waupaca, Waushara and Marquette). North Dakota (all areas east of Interstate 29 from Fargo south to the South Dakota state line); South Dakota (all areas east of Interstate 29 from the North Dakota state line to Watertown, all areas east of Highway 81 from Watertown to Madison and all areas east and south of state Road 34 and U.S. Highway 281 to the Nebraska state line).

# **REPLANTING**

If replanting is necessary in fields previously treated with this product, the field may be replanted to Soybeans. During planting, a minimum of tillage is recommended. Do not apply a second application of this product or any product that contains Metolachlor or Fomesafen as crop injury or illegal residues may occur in harvested Soybeans.

#### **ROTATIONAL CROPS**

Do not rotate to food or feed crops other than those listed below.

Table 1. Crop Rotation Intervals Following Applications of This Product

Minimum Rotational Interval Following Applications of This Product*				
0 Months	1 Month	4.5 Months	10 Months	18 Months
Dry bean Snap bean Soybean	Cotton	Barley Oat Rye Wheat	Corn** Peanut Pea Pepper Rice Tomato	To avoid crop injury, do not plant Alfalfa, Sorghum***, Sugar beet, Sunflower or any other crops within 18 months.

Do not graze rotated small grain crops or harvest forage or straw for livestock.

- \*Cover crops for soil building or erosion control may be planted any time, but do not graze or harvest for food or feed. Stand reductions may occur in some areas.
- \*\* Use a 12 month minimum rotation interval for Popcorn in the states of Ohio, Kentucky, Illinois, Indiana lowa and Region 4 when applied at 2 pts. / Ac. or greater.
- \*\*Use 18 month minimum rotation interval for Sweet corn in the states of Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island and Vermont.

  \*\*\*Sorghum may be planted back after 10 months in Region 1.

#### **RATE RANGES**

Where a rate range is within a soil texture/organic matter classification, use a lower rate on soils that are relatively *Coarse textured* and/or low in organic matter. Use a higher rate on soils that are relatively *Fine textured* and/or high in organic matter. This product when applied as directed will control or partially control the following weeds:

Table 2. Weeds Controlled or Partially Controlled by This Product

Weed	C= Control PC= Partial Control*
Annual Grasses	
Barnyard grass	С
Crabgrass spp.	С
Crowfoot grass	С
Cupgrass, Prairie	С
Cupgrass, Southwestern	С
Foxtail spp.	С
Goose grass	С
Johnsongrass seedling	PC
Jungle rice	С
Panicum, Fall	С
Panicum, Texas	PC
Red rice	PC
Sandbur spp.	PC
Shattercane	PC
Signal grass, Broadleaf	C
Witchgrass	C
Broadleaves	
Carpetweed	С
Cocklebur, Common	PC
Eclipta	C
Galinsoga spp.	C
Horseweed/Marestail	PC
Jimsonweed	PC
Lambsquarters, Common	C
Morningglory spp.	PC
Nightshade, Eastern black	C
Nightshade, Hairy	PC
Pennycress, Field	C
Pepper weed, Virginia	C
	C
Pigweed spp.	C
Poinsettia, Wild	
Purslane, Common	C
Pusley, Florida	C
Ragweed, Common	C
Ragweed, Giant	PC
Red weed	C
Sida, Prickly/Tea weed	PC
Smartweed. Ladys thumb	C
Smartweed, Pennsylvania	С
Spurge, Spotted	С
Starbur, Bristly	С
Sunflower, Common	PC
Velvetleaf	PC
Water hemp, spp.	С
Sedges	
Nutsedge, Yellow	PC

# COTTON

### POST-DIRECTED APPLICATION

Apply this product in emerged Cotton as a post-directed treatment using precision post-directed, hooded or shielded application equipment to provide complete coverage of emerged weeds. Apply this product at 2 to 2.33 pints per acre. This product will control or partially control certain emerged broad leaf weeds such as Hemp sesbania, Water hemp, Pigweed species and Morningglory species. Apply when broadleaf weeds have 2 to 4 true leaves in a minimum of 10 gallons spray solution per acre.

This product should be applied with a non-ionic surfactant at 0.25 to 0.5% v/v or crop oil concentrate at 1% v/v to emerged weeds if applied alone or in a tank-mix with products that do not contain a built-in adjuvant. Do not add liquid nitrogen (28% or similar) to this product or tank-mixes containing this product in Cotton. Refer to **Table 2** for weeds controlled or partially controlled with soil activation of this product if rainfall or irrigation occurs within 7 to 10 days after application.

To broaden the weed control spectrum, this product may be tank-mixed with other labeled post-directed herbicides such as Diuron, Glyphosate (for use in Glyphosate tolerant Cotton only), Linuron, MSMA, Prometryn or Trifloxysulfuron. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank-mixture.

Cotton foliage is not tolerant to applications of this product. Avoid contact to Cotton foliage and stems that are not fully barked as unacceptable injury will occur. Application equipment should be calibrated (spray pressure, nozzle type and configuration and orifice size) to avoid fine spray droplets contacting green Cotton stems and foliage.

#### POST-DIRECTED APPLICATION TIMING IN COTTON

This product may be applied to Cotton at least 6 inches in height through lay-by as a post-directed application. All post-directed applications should avoid spray contact with any green non-barked parts of the Cotton plant or foliage as unacceptable injury will occur. Follow the application timing directions below for post-directed applications in Cotton.

## SHIELDED AND HOODED APPLICATIONS

Make a precision post-directed application of this product to the base of the Cotton plant avoiding contact with the Cotton stem or foliage when Cotton is at least 6 inches in height to avoid Cotton injury. Use only hooded or shielded spray equipment to apply this product in Cotton that is at least 6 inches in height. Adjust nozzles to provide full coverage of emerged target weeds.

#### **LAY-BY APPLICATIONS**

Make a post-directed application of this product to the base of the Cotton plant avoiding contact with any non-barked portion of the Cotton plant or foliage. Use precision post-directed equipment or hooded or shielded sprayers on Cotton that has developed a minimum of 4 inches of brown bark through lay-by. Application equipment should be configured to provide full coverage of emerged target weeds.

#### **USE RESTRICTIONS - COTTON**

- Do not apply this product later than 80 days before harvest.
- Do not apply more than 2.33 pints per acre of this product in any year and also adhere to the maximum rate that may be applied in each geographic region (refer to the "REGIONAL USE MAP").
- Do not graze or feed forage or fodder from Cotton to livestock.

#### **SOYBEANS**

# FOUNDATION TREATMENT FOR PLANNED TWO-PASS WEED CONTROL PROGRAMS IN ALL TILLAGE SYSTEMS

This product at 2 pints per acre may be applied as a pre-emergence application on all soils to reduce competition from weeds for a period of up to 5 weeks when followed by a planned post-emergence herbicide application in conventional and Glyphosate tolerant Soybeans. Refer to **Table 2** for weeds controlled or partially controlled by this product. For the post-emergence herbicide application, consult the label of the selected post-emergence herbicide for weeds controlled, optimum weed size, application rate, additional use directions, precautions and limitations before use.

# PRE-PLANT SURFACE APPLIED

For minimum-tillage or no-tillage systems only, this product may be applied at 2 pints per acre prior to Soybean planting. If weeds are present at the time of treatment, apply this product in a tank-mixture with a burndown herbicide (such as Paraquat or Glyphosate). To the extent possible, minimize movement of treated soil out of the row or untreated soil to the surface during planting or weed control will be diminished. Follow with a post-emergence herbicide applied at the labeled rate and within the specific growth stage for Soybeans and weed spectrum. Post-emergence treatments include any product or combination of products labeled to control the specific weeds remaining in the field including Glyphosate (for use on Glyphosate tolerant Soybeans only).

#### PRE-PLANT INCORPORATED

Apply this product at 2 pints per acre in conventional tillage systems where incorporation into the top 2 inches of soil occurs within 7 days

after application using a finishing disk, harrow, rolling cultivator or similar implement capable of providing uniform 2 inch incorporation. Follow with a post-emergence herbicide applied at the labeled rate and within the specific growth stage for Soybeans and weed spectrum. Post-emergence treatments include any product or combination of products labeled to control the specific weeds remaining in the field including Glyphosate (for use on Glyphosate tolerant Soybeans only).

PRE-EMERGENCE

Apply this product at 2 pints per acre during planting (behind the planter) or after planting, but before weeds or Soybeans emerge in conventional, conservation or no-till systems. If weeds are present at the time of treatment, apply this product in a tank-mixture with a burndown herbicide such as Paraquat or Glyphosate. Follow with a post-emergence herbicide applied at the labeled rate and within the specific growth stage for Soybeans and weed spectrum. Post-emergence treatments include any product or combination of products labeled to control the specific weeds remaining in the field including Glyphosate (for use on Glyphosate tolerant Soybeans only) or Glufosinate (Glufosinate tolerant Soybeans only).

#### **CONVENTIONAL TILLAGE SYSTEMS**

For conventional tillage systems, this product may be applied preplant incorporated or pre-emergence for control or partial control of weeds listed in **Table 2**. This product may be applied alone or in tank-mix or followed sequentially with post-emergence herbicides to broaden the weed control spectrum or control newly emerged weeds. Refer to **Table 3** for use rates for this product.

#### PRE-PLANT INCORPORATED APPLICATION

Incorporate this product uniformly into the top 2 inches of soil within 7 days after application and before planting using a disk, field cultivator, rolling cultivator or similar implement. Apply this product pre-plant incorporated if furrow irrigation is used or when a period of dry weather after application is expected.

#### PRE-EMERGENCE APPLICATION

Apply during planting (behind the planter) or after planting, but before weeds or Soybeans emerge. Dry weather following pre-emergence applications of this product may reduce effectiveness. If weeds develop, cultivate uniformly with shallow tilling equipment such as a rotary hoe that will not damage Soybeans.

Table 3. Use Rates - Conventional Tillage Systems (Broadcast Rates)

		Pts. / Ac.	
Soil Texture	Regions	0.5 to 3% Organic Matter	> 3%
COARSE (Sand, Loamy sand, Sandy loam)	1, 2	2	2 to 2.25
	3	2	2 to 2.25
	4	2	2
MEDIUM (Loam, Silt loam, Silt)	1, 2	2.25 to 2.5	2.5 to 2.75
	3	2 to 2.25	2.25 to 2.5
	4	2	2
FINE (Sandy clay loam, Sandy clay, Silty clay, Silty clay loam, Clay, Clay loam)	1, 2	2.75 to 3	2.75 to 3
	3	2.5*	2.5*
	4	2*	2*
* If weeds emerge before full canopy closure, apply an appropriate post-emergence product.			

USE RATES FOR REDUCED AND NO-TILL SYSTEMS

Pre-plant Surface and Pre-emergence Application

This product may be used in reduced-till and no-till systems. This product may be applied up to 15 days before planting or preemergence but before Soybean emergence. For control or partial
control of weeds listed in **Table 2**, use the high end of the rate range
for applications of this product, made 15 days before planting. Refer
to **Table 4** for rates. If weeds are present at time of application,
burndown herbicides may be tank-mixed with this product (see
"BURNDOWN WEED CONTROL" section). This product may be
followed sequentially with post-emergence herbicides to broaden the
weed control spectrum or control newly emerged weeds.

Table 4: Use Rates for Reduced-Till and No-Till Systems (Broadcast Rates)

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Soil Texture	Regions	Pts. / Ac.*
COARSE (Sand, Loamy sand, Sandy	1, 2	2 to 2.5
loam)	3	2 to 2.25
	4	2**
MEDIUM (Loam, Silt loam, Silt, Sandy clay,	1, 2	2.5 to 2.75
Sandy clay loam)	3	2.25 to 2.5
	4	2**
FINE (Sandy clay loam, Sandy clay, Silty	1, 2	2.75 to 3
clay, Silty clay loam, Clay, Clay loam)	3	2.5**
	4	2**

\* If weeds emerge before full canopy closure, apply an appropriate post-emergence product.
\* Use the lower rate range for low residue level or soils with less than 3% organic matter. Use
the higher rate range for high residue level or soils with greater than 3% organic matter.

#### **BURNDOWN WEED CONTROL**

This product can be used as part of a burndown herbicide program for control of existing vegetation prior to Soybean planting and/or emergence in conservation tillage (reduced-tillage/no-till) systems. This product may be tank-mixed with Clethodim, 2,4-D Low Volatile Ester (LVE), Fluazifop, Fenoxaprop, Glyphosate, Paraquat or Sethoxydim for control of emerged weeds prior to Soybean planting or crop emergence. Refer to the tank-mix product labels for specific rates, use directions, precautions and limitations. Follow the most restrictive label.

# HERBICIDES THAT MAY BE APPLIED POST-EMERGENCE FOLLOWING THIS PRODUCT

If required, applications of this product alone or in tank-mixture may be followed by an application of a post-emergence herbicide to provide additional control of certain weeds. Post-emergence herbicides such as those listed below may be applied:

Acifluorfen	Fluazifop	Lactofen
Bentazon	Flumiclorac	Quizalofop
Carfentrazone	Glufosinate**	Sethoxydim
Chloransulam	Glyphosate***	Thifensulfuron*
Chlorimuron*	Imazamox	Tribenuron
Clethodim	Imazaquin	
Fenoxaprop	Imazethapyr	

- \*Use on Sulfonyl-urea Tolerant (STS) Soybeans only.
- \*\*Use on Glufosinate tolerant Soybeans only (e.g., LibertyLink® Soybeans).
- \*\*\*Use on Glyphosate tolerant Soybeans only (e.g., Roundup Ready® Soybeans)

Refer to the above information and the individual product labels for use directions, use rates and special precautions and restrictions. Follow the most restrictive label.

#### POST-EMERGENCE APPLICATION

This product may be applied at 2 to 2.33 pints per acre as an early post-emergence application in Soybeans. Necrotic spotting, bronzing, leaf crinkling or curling of Soybean leaves may occur following postemergence application, but Soybeans soon outgrow these effects and develop normally. Refer to Table 2 for weeds controlled or partially controlled with soil activation of this product if rainfall or irrigation occurs within 7 to 10 days after post-emergence application. This product alone may control or partially control certain emerged broadleaf weeds, however, for broad spectrum control, tank-mix this product with Glyphosate (in Glyphosate tolerant Soybeans only). Add Non-lonic Surfactant (NIS) containing at least 75% surface-active agent at 0.25% v/v to the final spray volume if this product is applied alone or tank-mixed with Glyphosate products that do not contain a built-in adjuvant. Do not use Crop Oil Concentrate (COC) when applying this product post-emergence as these spray adjuvants may increase Soybean injury.

Tank-Mixtures for Post-emergence Applications in Soybeans

This product may be tank-mixed with Glyphosate products and applied post-emergence only on Glyphosate tolerant Soybeans. This product may be tank-mixed with insecticides including Lambda-cyhalothrin. Refer to the label of this product and the labels of the tank-mix partners for application methods and timings, precautionary statements, restrictions, rates and weeds or insects controlled. Follow the most restrictive label.

### Use Precautions for Post-emergence Application to Soybeans

- Apply only in water as the carrier for post-emergence applications.
- Do not use this product post-emergence on Soybeans that are under stress including but not limited to that caused by drought, insect, disease or injury from cultivation.

# Use Restrictions for Post-emergence Application to Soybeans

- Do not exceed 2.33 pints of this product per acre in a single postemergence application.
- Do not exceed 3 pints of this product per acre per year. Refer to "REGIONAL USE MAP" for maximum rate that may be applied within a specific region.
- Do not exceed 2.75 pounds of Metolachlor active ingredient per year from applications of this product or any other Metolachlor containing products.
- Make post-emergence applications at least 90 days before harvest.
- Do not graze or feed treated forage or hay from Soybeans to livestock following a post-emergence application of this product.

# STORAGE AND DISPOSAL

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

**STORAGE:** Store in original container. This product will freeze at a temperature of approximately 5°F, but upon warming, will thaw out to a fully homogeneous product.

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

#### **CONTAINER HANDLING:**

Nonrefillable Container (rigid material; ≤ 5 gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth 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. Dispose of empty container in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Container (rigid material; > 5 gallons up to < 250 gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Refillable Container (≥ 250 gallons & Bulk): Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

#### WARRANTY — CONDITIONS OF SALE

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixture with other chemicals not specifically directed and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable laws, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. To the extent consistent with applicable laws, in no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

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