

# Specimen Label



# Milestone<sup>®</sup> VM

## Specialty Herbicide

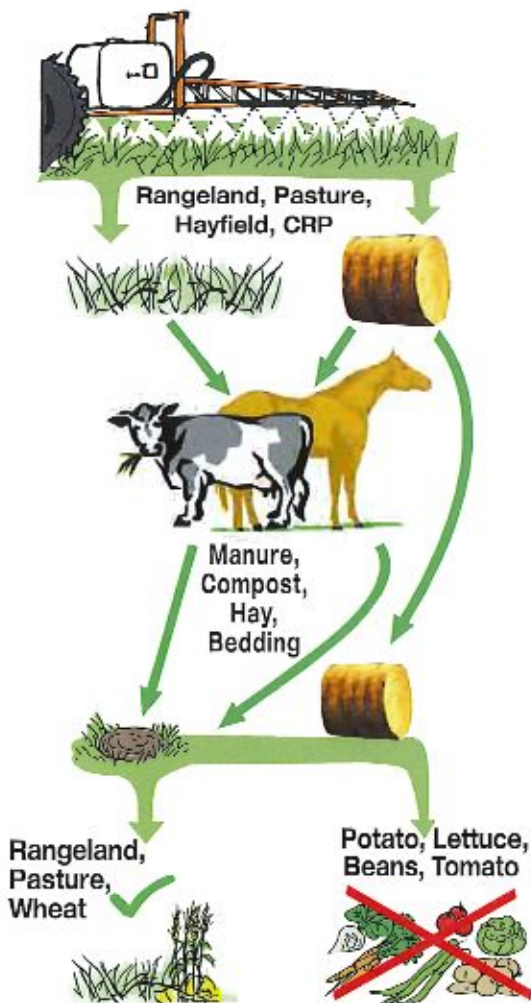
<sup>®</sup>Trademark of Dow AgroSciences LLC

For control of susceptible weeds and certain woody plants, including many invasive and noxious weeds, on non-cropland areas including industrial sites, rights-of-way (such as roadsides, electric utility and communication transmission lines, pipelines, and railroads), non-irrigation ditch banks, natural areas (such as wildlife management areas, wildlife openings, wildlife habitats, recreation areas, campgrounds, trailheads and trails), and grazed areas in and around these sites.

### IMPORTANT ADVISORY TO PREVENT INJURY TO DESIRABLE PLANTS

- It is mandatory to follow the **"Use Precautions and Restrictions"** section of this product label.
- Carefully read the section **"Plant Residues or Manure."**
- Manure and urine from animals consuming treated grass or hay may contain enough aminopyralid to cause injury to sensitive broadleaf plants.
- Inform the recipient of hay or manure from animals grazing pastures or feeding on hay from areas treated with aminopyralid of the label use precautions and restrictions.
- Consult with a Dow AgroSciences representative if you do not understand the "Use Precautions and Restrictions".  
Call [1-(800) 263-1196]  
Customer Information Group.

### Hay and Manure Management



Not For Sale, Distribution, or Use in New York State.

GROUP	4	HERBICIDE
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Active Ingredient:

Trifluropropanolammonium salt of 2-pyridine carboxylic acid, 4-amino-3,6-dichloro-	40.6%
Other Ingredients	59.4%
Total	100.0%

Acid Equivalent: aminopyratid (2-pyridine carboxylic acid, 4-amino-3,6-dichloro-) - 21.1% - 2 lb/gal

EPA Reg. No. 62719-537

### Keep Out of Reach of Children

## CAUTION

Refer to inside of label booklet for Directions for Use.

**Notice:** Read the entire label. Use only according to label directions. Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

<b>1 - Tip</b>  Tilt container to angle as shown and fill head to desired amount - use vertical scale for measuring. Container should be closed.	<b>2 - Level</b>  Hold container up, right and check the amount for accuracy. Add or subtract as needed, using pour-back scale as guide.	<b>3 - Dispense</b>  Remove cap on head and pour into sprayer or other device. No fluid will pour from the main container. Replace cap for storage in sealed condition.
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### Precautionary Statements

#### Hazards to Humans and Domestic Animals

## CAUTION

Causes Moderate Eye Irritation

Avoid contact with eyes or clothing.

#### Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

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

#### User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

#### First Aid

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. Call a poison control center or doctor for treatment advice.

#### First Aid (Cont.)

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

#### Environmental Hazards

Do not apply directly to water, 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.

#### 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.

Not For Sale, Distribution, or Use in New York State.

Entry Restrictions: For applications on non-cropland areas, do not enter or allow worker entry into treated areas until sprays have dried.

#### Storage and Disposal

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

**Pesticide Storage:** If this product is exposed to subfreezing temperatures, the active ingredient may crystallize and settle out of solution. Under these conditions the product should be warmed to at least 40°F and agitated well to dissolve any crystallized active ingredient prior to use.

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

**Nonrefillable containers 5 gallons or less:**

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure rinse container (or equivalent) 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 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. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**Refillable containers larger than 5 gallons:**

**Container Handling:** 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 a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**Nonrefillable containers larger than 5 gallons:**

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or puncture and dispose of in

## Storage and Disposal (Cont.)

a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 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. 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Milestone<sup>®</sup> VM specialty herbicide may be applied by aerial or ground equipment to control susceptible weeds and certain woody plants, including invasive and noxious weeds on non-cropland areas including industrial sites, rights-of-way (including roadsides, electric utility and communication transmission lines, pipelines, and railroads), non-irrigation ditch banks, natural areas (including wildlife management areas, wildlife openings, wildlife habitats, recreation areas, campgrounds, trailheads and trails), and grazed areas in and around these sites without injury to most grasses.

It is permissible to treat non-irrigation ditch banks, seasonally dry wetlands (such as flood plains, ditches, marshes, swamps, or bogs) and transitional areas between upland and lowland sites. Milestone VM can be used to the water's edge. Do not apply directly to water and take precautions to minimize spray drift onto water.

## Resistance Management Guidelines

- Development of plant populations resistant to this herbicide mode of action is usually not a problem on non-cropland sites since these sites receive infrequent pesticide applications.
- Similar looking biotypes of a given weed species occurring in a treated area may vary in their susceptibility to a herbicide. Application of a herbicide below its labeled rate may allow more tolerant weeds to survive and a shift to more tolerant biotypes within the treated area.
- Where identified, spreading of resistant weeds to other fields may be prevented by cleaning harvesting and tillage equipment before moving to other areas and by planting weed-free seed.
- Contact your extension specialist, certified crop consultant, or Dow AgroSciences representative for the latest resistance management information.

## Use Precautions and Restrictions

Consult with a Dow AgroSciences representative if you do not understand the "Use Precautions and Restrictions." Call (1-800-263-1196) for more information.

- This product is not intended for reformulation or repackaging into other end-use products.
- **Maximum Application Rate:** On all labeled use sites do not broadcast apply more than 7 fl oz per acre of Milestone VM per year. The total amount of Milestone VM applied broadcast, as a re-treatment, and/or spot treatment cannot exceed 7 fl oz per acre per year. Spot treatments may be applied at an equivalent broadcast rate of up to 0.22 lb acid equivalent (14 fl oz of Milestone VM) per acre per annual growing season; however, not more than 50% of an acre may be treated at that rate. Do not apply more than a total of 0.11 lb acid equivalent (7 fl oz per acre of Milestone VM) per annual growing season as a result of broadcast, spot or repeat applications.
- **Avoiding Injury to Non-Target Plants:** Do not aerially apply Milestone VM within 50 feet of a border downwind (in direction of wind movement), or allow spray drift to come in contact with, any broadleaf crop or other desirable broadleaf plants, including, but not limited to, alfalfa, cotton, dry beans, flowers, grapes, lettuce, potatoes, radishes, soybeans, sugar beets, sunflowers, tobacco, tomatoes

or other broadleaf or vegetable crop, fruit trees, ornamental plants, or soil where sensitive crops are growing or will be planted. Avoid application under conditions that may allow spray drift because very small quantities of spray may seriously injure susceptible crops. Read and consider the "Precautions for Avoiding Spray Drift and Spray Drift Advisory" at the end of the label to help minimize the potential for spray drift.

- **Milestone VM is highly active against many broadleaf plant species.** Do not use this product on areas where loss of desirable broadleaf plants, including legumes, cannot be tolerated.
- **Do not use on grasses grown for hay intended for export.**
- **Do not use on grasses grown for seed production.**
- **Chemigation:** Do not apply this product through any type of irrigation system.
- **Do not contaminate water intended for irrigation or domestic purposes.** Do not treat inside banks or bottoms of irrigation ditches, either dry or containing water, or other channels that carry water that may be used for irrigation or domestic purposes.
- **Do not apply this product on residential or commercial lawns, turf, or ornamental plantings.**
- Trees adjacent to or in a treated area can occasionally be affected by root uptake of Milestone VM. Do not apply Milestone VM within the root zone of desirable trees unless such injury can be tolerated. Use special caution near roses, and leguminous trees such as locusts, redbud, mimosa, and caragana.
- **Seeding grasses:**
  - **Preemergence:** Milestone VM may be applied in the spring or early summer, depending on the target weed species, and grass planted the following fall or winter when appropriate for the grass species being planted.
  - **Postemergence:** During the season of establishment, Milestone VM should be applied only after perennial grasses are well established (have developed a secondary root system and are vigorous). Most perennial grasses are tolerant to Milestone VM at this stage of development. Milestone VM may suppress certain established grasses, such as smooth bromegrass (*Bromus inermis*), especially when plants are stressed by adverse environmental conditions. Plants should recover from this transient suppression with the onset of environmental conditions favorable to grass growth and upon release from weed competition.
- **Seeding Legumes or Susceptible Wildflowers:** Do not plant legumes or susceptible wildflowers until a soil bioassay has been conducted to determine if residues of Milestone VM remaining in the soil will adversely affect establishment of legumes and wildflowers.
- **Grazing and Haying Restrictions:** There are no restrictions on grazing or hay harvest following application of Milestone VM at labeled rates. Cutting hay too soon after spraying weeds will reduce weed control. Wait 14 days after herbicide application to cut grass hay to allow herbicide to work. Do not transfer grazing animals from areas treated with Milestone VM to areas where sensitive broadleaf crops occur without first allowing 3 days of grazing on an untreated pasture. Otherwise, urine and manure may contain enough Milestone VM to cause injury to broadleaf plants.
- **Grazing Poisonous Plants:** Herbicide application may increase palatability of certain poisonous plants. Do not graze treated areas until poisonous plants are dry and no longer palatable to livestock.
- **Plant Residues or Manure:**
  - Do not use Milestone VM-treated plant residues, including hay or straw from treated areas, or manure from animals that have grazed forage or eaten hay harvested from treated areas within the previous 3 days as compost or mulch that will be applied to areas where commercially grown mushrooms or susceptible broadleaf plants may be grown.
  - Do not spread manure from animals that have grazed or consumed forage or hay from treated areas within the previous 3 days on land used for growing susceptible broadleaf crops.
  - Manure from animals that have grazed forage or eaten hay harvested from Milestone VM-treated areas within the previous 3 days may only be spread on pasture grasses, grass grown for seed, and wheat.
  - Do not plant a broadleaf crop in fields treated in the previous year with manure from animals that have grazed forage or eaten hay harvested from Milestone VM-treated areas until an adequately sensitive field bioassay is conducted to determine that the Milestone VM residues in the soil is at a level that is not injurious to the crop to be planted.

- To promote herbicide decomposition, plant residues should be evenly incorporated in the surface soil or burned. Breakdown of Milestone VM in plant residues or manure is more rapid under warm, moist soil conditions and may be accelerated by supplemental irrigation.
- **Crop Rotation:** Do not rotate non-cropland to cropland for one year following an application of Milestone VM. Do not plant a broadleaf crop until an adequately sensitive field bioassay shows that the level of aminopyralid present in the soil will not adversely affect that broadleaf crop.
- **Field Bioassay Instructions:** In a representative section of an area previously treated with this product, plant short test rows of the intended species across the original direction of application in a manner to sample variability in field conditions such as soil texture, soil organic matter, soil pH, rainfall pattern or drainage. The field bioassay can be initiated at any time after application and before the planting of the intended species. Observe the seeded species for symptoms of herbicidal activity, such as poor stand (effect on seed germination), chlorosis (yellowing), necrosis (dead leaves or shoots), or stunting (reduced growth). If herbicidal symptoms do not occur, the intended seeded species may be planted. If herbicidal activity is observed, do not plant the field to the intended seeded species, plant only to wheat, forage grasses, native grasses or grasses grown for hay.

#### Sprayer Clean-Out Instructions

It is recommended that separate spray equipment be used on highly sensitive crops such as tobacco, soybeans, peanuts and tomatoes. Do not use spray equipment used to apply Milestone VM for other applications to land planted to, or to be planted to, broadleaf plants unless it has been determined that all residues of this herbicide has been removed by thorough cleaning of equipment.

Equipment used to apply Milestone VM should be thoroughly cleaned before reusing to apply any other chemicals as follows:

1. Rinse and flush application equipment thoroughly after use. Dispose of rinse water in non-cropland area away from water supplies.
2. Rinse a second time, adding 1 quart of household ammonia or tank cleaning agent for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15 to 20 minutes). Let the solution stand for several hours, preferably overnight.
3. Flush the solution out of the spray tank through the boom.
4. Rinse the system twice with clean water, recirculating and draining each time.
5. Spray nozzles and screens should be removed and cleaned separately.

#### Application Methods

Apply the specified rate of Milestone VM as a coarse low-pressure spray. Do not apply this product with mist blower systems that deliver very fine spray droplets. Spray volume should be sufficient to uniformly cover foliage. Increase spray volume to ensure thorough and uniform coverage when target vegetation is tall and/or dense. To enhance foliage wetting and coverage, an approved non-ionic agricultural surfactant may be added to the spray mixture as specified by the surfactant label.

**Ground Broadcast Application:** Higher spray volumes (greater than 10 gallons per acre) generally provides better coverage and better control, particularly in dense and/or tall foliage.

**Aerial Broadcast Application:** Do not apply less than 2 gallons per acre total spray volume. Five gallons per acre or greater will generally provide better coverage and better control, particularly in dense and/or tall foliage.

**High-Volume Foliar Application:** High volume foliar treatments may be applied at rates equivalent to broadcast up to a maximum of 7 fl oz per acre per annual growing season. Do not apply more than a total of 0.11 lb acid equivalent (7 fl oz per acre of Milestone VM) per annual growing season as a result of broadcast, spot or repeat applications. Spray volume should be sufficient to thoroughly and uniformly wet weed foliage but not to the point of runoff.

**Spot Application:** Spot treatments may be applied at an equivalent broadcast rate of up to 0.22 lb acid equivalent (14 fl oz of Milestone VM) per acre per annual growing season; however, not more than 50% of an acre may be treated at that rate. Do not apply more than a total of 0.11 lb acid equivalent (7 fl oz per acre of Milestone VM) per annual growing season as a result of broadcast, spot or repeat applications. Spray volume should be sufficient to thoroughly and uniformly wet weed foliage but not to the point of runoff.

Repeat treatments may be made, but the total amount of Milestone VM applied must not exceed 7 fl oz per acre per year. To prevent misapplication, spot treatments should be applied with a calibrated sprayer.

Note: Table 1 below shows mixes for various sprayer outputs in gallons per acre (GPA).

Table 1: Amount of Milestone VM herbicide (in mL) to mix in 1 gallon of water

Milestone VM amount (in mL) to mix with various application rates			
GPA	5 fl oz/a	7 fl oz/a	14 fl oz/a
20	7.5	10.5	21.0
30	5.0	7.0	14.0
40	3.8	5.3	10.5
50	3.0	4.2	8.4
60	2.5	3.5	7.0
70	2.1	3.0	6.0
80	1.9	2.6	5.3
90	1.7	2.3	4.7
100	1.5	2.1	4.2

Use a syringe to measure cc

#### Conversions:

1 tsp = 5 mL    30 mL = 1 fluid ounce    1 cc = 1 mL  
3 tsp = 1 Tbsp    2 Tbsp = 1 fluid ounce

Table 2: Application rates in the table below are based on treating an area of 1000 sq ft. An area of 1000 sq ft is about 31.5 ft by 31.5 ft (10.5 by 10.5 yards) in size. Mix the amount of Milestone VM (fl oz or milliliters) corresponding to the desired broadcast rate in 0.5 to 2.5 gallons of water, depending upon the spray volume required to treat 1000 sq ft. A delivery volume of 0.5 to 2.5 gallons per 1000 sq ft is equivalent to 22 to 109 gallons per acre.

Broadcast Rate (fl oz/acre)	Amount of Milestone VM per 1000 sq ft to Equal Broadcast Rate	
	(fl oz)	(Milliliters)
3	0.069	2
5	0.115	3.4
7	0.161	4.8

Note: 1 mL = 1 cc and 1 fluid ounce (fl oz) = 29.8 milliliters (mL) = 2 tablespoons = 3 teaspoons

To calculate the amount of Milestone VM for areas larger than 1000 sq ft: Multiply the table value (fl oz or milliliters) by the area to be treated in "thousands" of square feet. For example, if the area to be treated is 3500 sq ft, multiply the table value by 3.5 (3500 sq ft divided by 1000 sq ft = 3.5).

#### Mixing Instructions

**Mixing with Water:** To prepare the spray, add about half the required amount of water in the spray tank. Then, with agitation, add the specified amount of Milestone and other registered tank mix herbicides. Finally, with continued agitation, add the rest of the water and additives such as surfactants or drift control and deposition aids.

**Addition of Surfactants or Adjuvants on All Labeled Use Sites:** For post emergent applications, a non-ionic surfactant (of at least 80% active ingredient) at 0.25 to 0.5 % volume per volume (1 to 2 quarts per 100 gallons of spray) is recommended to enhance herbicide activity under adverse environmental conditions (such as, high temperature, low relative humidity, drought conditions, dusty plant surfaces) or when weeds are heavily pubescent or more mature.

**Tank Mixing with Other Herbicides:** Milestone at rates of up to 7 fl oz per acre may be mixed with labeled rates of other herbicides registered for application on all labeled use sites. Milestone may be applied in tank

mix combination with labeled rates of other herbicides provided: (1) the tank mix product is labeled for the timing and method of application for the use site to be treated and (2) mixing is not prohibited by the label of the registered tank mixed products, and (3) that the tank mix combination is physically compatible (see tank mix compatibility testing below). When tank mixing, use only in accordance with the restrictions, precautions and limitations on the respective product labels.

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- Do not exceed specified application rates. If products containing the same active ingredient are mixed, do not exceed the maximum allowable active ingredient use rates.
- For direct injection or other spray equipment where the product formulations will be mixed in undiluted form, special care should be taken to ensure tank mix compatibility.
- Always perform a jar test to ensure the compatibility of products to be used in tank mixture.

**Tank Mix Compatibility Testing:** Perform a jar test prior to mixing in a spray tank to ensure compatibility of Milestone and other pesticides or carriers. Use a clear glass jar with lid and mix ingredients in the same order and proportions as will be used in the spray tank. The mixture is compatible if the materials mix readily when the jar is inverted several times. The mixture should remain stable after standing for 1/2 hour or, if separation occurs, should readily remix if agitated. An incompatible mixture is indicated by separation into distinct layers that do not readily remix when agitated and/or the presence of flakes, precipitates, gels, or heavy oily film in the jar. Use of an appropriate compatibility aid may resolve mix incompatibility. If the mixture is incompatible do not use that tank mix partner in tank mixtures.

**Mixing with Sprayable Liquid Fertilizer Solutions:** Milestone is usually compatible with liquid fertilizer solutions. It is anticipated that Milestone will not require a compatibility agent for mixing with fertilizers; however, a compatibility test (jar test) should be made prior to mixing. Jar tests are particularly important when a new batch of fertilizer or pesticide is used, when water sources change, or when tank mixture ingredients or concentrations are changed. Compatibility may be determined by mixing the spray components in the desired order and proportions in a clear glass jar before large scale mixing of spray components in the spray tank.

**Note:** The lower the temperature of the liquid fertilizer, the greater the likelihood of mixing problems. Use of a compatibility aid may be required if Milestone is mixed with a 2,4-D-containing product and liquid fertilizer. **Mixing Milestone and 2,4-D in N-P or N-P-K liquid fertilizer solutions is more difficult than mixing with straight nitrogen fertilizer and should not be attempted without first conducting a successful compatibility jar test.** Agitation in the spray tank must be vigorous to be comparable with jar test agitation. Apply the spray mixture the same day it is prepared while maintaining continuous agitation. Rinse the spray tank thoroughly after use.

**Note:** Foliar-applied liquid fertilizers themselves can cause yellowing of the foliage of forage grasses and other vegetation.

Table 3: Weeds Controlled

**Note:** Numbers in parentheses (-) refer to specific use directions for a particular weeds species.

Common Name	Scientific Name	Rate Range (fl oz/acre)	Life Cycle	Plant Family
amaranth, spiny	<i>Amaranthus spinosus</i>	4 to 7	annual	Amaranthaceae
bedstraw	<i>Galium spp.</i>	4 to 7	perennial	Rubiaceae
beggarticks	<i>Bidens spp.</i>	4 to 7	annual	Asteraceae
broomweed, annual	<i>Amphiachyris dracunculoides</i>	4 to 7	annual	Asteraceae
burdock, common*, **	<i>Arctium minus</i>	4 to 7	biennial	Asteraceae
buttercup, hairy*	<i>Ranunculus sardous</i>	4 to 7	annual	Ranunculaceae
buttercup, tall*, **	<i>Ranunculus acris</i>	4 to 7	perennial	Ranunculaceae
carmenthorn	<i>Athagi pseudathagi</i>	5 to 7	perennial	Fabaceae
chamomile, scentless	<i>Matricaria inodora</i>	4 to 7	annual	Asteraceae
chicory*	<i>Cichorium intybus</i>	4 to 7	perennial	Asteraceae
chickweed	<i>Stellaria media</i>	7	annual	Caryophyllaceae

Milestone VM may be applied to all labeled use sites as an aerial or ground broadcast treatment, as a spot or high volume foliar application, to control susceptible weeds and certain woody plants, including invasive weeds (see Weeds Controlled section).

**Do not use Milestone VM if loss of legumes species or other broadleaf species cannot be tolerated.**

Milestone VM may be applied post emergence as a broadcast spray or as a spot application to control weeds including, but not limited to, those listed on this label. When a rate range is given use the higher rate to control weeds at advanced growth stages, or under less than favorable growing conditions, or for longer residual control. Best results are obtained when spray volume is sufficient to provide uniform coverage of treated weeds. For optimum uptake and translocation of Milestone, avoid mowing, haying, shredding, burning or soil disturbance in treated areas for at least 14 days following application.

Milestone VM also provides preemergence control of emerging seedlings of susceptible weeds, and re-growth of certain perennial weeds following application. Preventing establishment of weeds will depend upon application rate, season of application, and environmental conditions after application.

Milestone VM can provide long-term control of susceptible weeds. The length of control is dependent upon the application rate, condition and growth stage of target weeds, environmental conditions at and following application, and the density and vigor of competing desirable vegetation. Long-term weed control is most effective where grass vegetation is allowed to recover from overgrazing, drought, etc., and compete with weeds.

Milestone VM can be an important component of integrated vegetation management programs designed to renovate or restore desired plant communities. To maximize and extend the benefits of weed control provided by Milestone VM, it is important that other vegetation management practices, including proper grazing management, biological control agents, replanting, fertilization, prescribed fire, etc., be used in appropriate sequences and combinations to further alleviate the adverse effects of weeds on desirable plant species and to promote development of desired plant communities. Agricultural and natural resources specialists with federal and state government agencies can provide guidance on best management practices and development of integrated vegetation management programs.

#### Weeds Controlled

The following weeds will be controlled with the rates of Milestone VM indicated in table 3. For best results, most weeds should be treated when they are actively growing and under conditions favorable for growth. Use a higher rate in the rate range when growing conditions are less than favorable or when weed foliage is tall and dense or when residual control is desired. Milestone VM also provides preemergence control of germinating seeds and control of emerged seedlings of susceptible weeds following application.



Table 3: Weeds Controlled (Cont.)

Common Name	Scientific Name	Rate Range (ff oz/acre)	Life Cycle	Plant Family
cinquefoil, sulfur (1)*, **	<i>Potentilla recta</i>	4 to 7	perennial	Rosaceae
cocklebur	<i>Xanthium strumarium</i>	3 to 5	annual	Asteraceae
clover	<i>Trifolium spp.</i>	5 to 7	perennial	Fabaceae
croton, tropic	<i>Croton glandulosus</i>	3 to 5	annual	Euphorbiaceae
crownvetch	<i>Securigera varia</i>	5 to 7	perennial	Fabaceae
cutweed, purple	<i>Gamochaeta purpurea</i>	4 to 7	annual	Asteraceae
daisy, oxeye (1)*, **	<i>Leucanthemum vulgare</i>	4 to 7	perennial	Asteraceae
dock, curly*	<i>Rumex crispus</i>	4 to 7	perennial	Polygonaceae
evening primrose, cutleaf	<i>Oenothera laciniata</i>	4 to 7	annual	Onagraceae
fiddleneck, common	<i>Amsinckia intermedia</i>	7	annual	Boraginaceae
fireweed	<i>Epilobium angustifolium</i>	5 to 7	perennial	Onagraceae
fleabane, flax-leaf	<i>Conyza bonariensis</i>	4 to 7	annual	Asteraceae
hawkweed, orange (2)*, **	<i>Hieracium aurantiacum</i>	4 to 7	perennial	Asteraceae
hawkweed, yellow (2)*, **	<i>Hieracium caespitosum</i>	4 to 7	perennial	Asteraceae
herbbit*	<i>Lantana arplexicaule</i>	5 to 7	annual/ biennial	Lamiaceae
horsenettle, Carolina**	<i>Solanum carolinense</i>	4 to 7	perennial	Solanaceae
horseweed (marcstail)	<i>Conyza canadensis</i>	4 to 7	annual	Asteraceae
ironweed, tall	<i>Vernonia gigantea</i>	5 to 7	perennial	Asteraceae
ironweed, western	<i>Vernonia baldwinii</i>	7	perennial	Asteraceae
knapweed, diffuse (3)*, **	<i>Centaurea diffusa</i>	5 to 7	biennial/ perennial	Asteraceae
knapweed, Russian (4)*, **	<i>Acroptilon repens</i>	5 to 7	perennial	Asteraceae
knapweed, spotted (3)*, **	<i>Centaurea stoebe</i>	5 to 7	biennial/ perennial	Asteraceae
knapweeds	<i>Centaurea spp.</i>	5 to 7	biennial/ perennial	Asteraceae
kudzu*, **	<i>Pueraria montana</i>	7	perennial	Fabaceae
lady's thumb*	<i>Polygonum persicaria</i>	3 to 5	annual	Polygonaceae
lambquarters	<i>Chenopodium album</i>	5 to 7	annual	Chenopodiaceae
lespedeza, annual	<i>Lespedeza striata</i>	5 to 7	annual	Fabaceae
locust, black	<i>Robinia pseudoacacia</i>	7	woody perennial	Fabaceae
locust, honey	<i>Gleditsia triacanthos</i>	7	woody perennial	Fabaceae
mayweed, scentless*	<i>Tripleurospermum perforata</i>	4 to 7	annual	Asteraceae
mayweed, stinking*, **	<i>Anthemis cotula</i>	7	annual	Asteraceae
medic, black*	<i>Medicago lupulina</i>	4 to 6	perennial	Fabaceae
mimosa	<i>Albizia julibrissin</i>	7	woody perennial	Fabaceae
mullein (5)	<i>Verbascum spp.</i>	7	biennial	Scrophulariaceae
ox tongue, bristly	<i>Pitaris echinoides</i>	5 to 7	biennial	Asteraceae
ragweed, common**	<i>Ambrosia artemisiifolia</i>	3 to 5	annual	Asteraceae
ragweed, western	<i>Ambrosia psilostachya</i>	4 to 7	perennial	Asteraceae
ragwort, tansy*, **	<i>Senecio jacobaea</i>	5 to 7	perennial	Asteraceae
redbud	<i>Cercis Canadensis</i>	7	woody perennial	Fabaceae
rose	<i>Rosa spp.</i>	7	Woody perennial	Rosaceae
rush skeletonweed	<i>Chondrilla juncea</i>	5 to 7	perennial	Asteraceae
smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>	3 to 5	annual	Polygonaceae
sneezeweed, bitter	<i>Helenium amarum</i>	4 to 7	annual	Asteraceae
soda apple, tropical (6)*, **	<i>Solanum elaeagnifolium</i>	5 to 7	perennial	Solanaceae
sowthistle, perennial*, **	<i>Sonchus oleraceus</i>	3 to 5	perennial	Asteraceae
spainshneedles	<i>Elymus bipinnatus</i>	4 to 7	annual	Asteraceae
star-thistle, Malta (7)*, **	<i>Centaurea melitensis</i>	3 to 5	annual	Asteraceae
starthistle, purple (7)*, **	<i>Centaurea calcitrapa</i>	3 to 5	biennial	Asteraceae
star thistle, yellow (7)*, **	<i>Centaurea solstitialis</i>	3 to 5	annual	Asteraceae
St. Johnswort, common	<i>Hypericum perforatum</i>	5 to 7	perennial	Clusiaceae

Table 3: Weeds Controlled (Cont.)

Common Name	Scientific Name	Rate Range (fl oz/acre)	Life Cycle	Plant Family
sunflower, common	<i>Helianthus annuus</i>	4 to 7	annual	Asteraceae
ragwort	<i>Dipsacus spp.</i>	4 to 7	biennial	Dipsacaceae
thistle, artichoke	<i>Cynara cardunculus</i>	5 to 7	perennial	Asteraceae
thistle, bull (8)*, **	<i>Cirsium vulgare</i>	3 to 5	biennial	Asteraceae
thistle, Canada (8)*, **	<i>Cirsium arvense</i>	5 to 7	perennial	Asteraceae
thistle, woolly distaff	<i>Carthamus lanatus</i>	4 to 7	annual	Asteraceae
thistle, Italian	<i>Carduus pycnocephalus</i>	7	annual	Asteraceae
thistle, musk (8)*, **	<i>Carduus nutans</i>	3 to 5	biennial	Asteraceae
thistle, plumeless (8)*, **	<i>Carduus acanthoides</i>	3 to 5	biennial	Asteraceae
thistle, Scotch*, **	<i>Onopordum acanthium</i>	5 to 7	biennial	Asteraceae
vetch	<i>Vicia spp.</i>	3 to 7	perennial	Fabaceae
wisteria	<i>Wisteria brachybotris</i>	7	woody perennial	Fabaceae
wormwood, absinth(10)*, **	<i>Artemisia absinthium</i>	6 to 7	perennial	Asteraceae
yarrow, common	<i>Achillea millefolium</i>	7	perennial	Asteraceae

\*Invasive plants are introduced species that are indicated to be invasive in the USDA-NRCS, PLANTS Database (<http://plants.usda.gov/index.html>).

\*\*Plants designated as noxious weeds in at least one state (PLANTS Database, USDA-NRCS, <http://plants.usda.gov/index.html>).

- (1) **Sulfur cinquefoil or oxeye daisy:** Apply Milestone at 4 to 6 fl oz per acre to plants in the prebud stage of development.
- (2) **Orange or yellow hawkweeds:** Apply Milestone at 4 to 7 fl oz per acre to plants in the bolting stage of development.
- (3) **Diffuse and spotted knapweeds:** Apply Milestone at 5 to 7 fl oz per acre when plants are actively growing with the optimum time of application occurring from rosette to the bolting stages of development or in the fall. Plants will be controlled by mid-summer and fall applications even though plants may not show any changes in form or stature the year of application.
- (4) **Russian knapweed:** Apply Milestone at 5 to 7 fl oz per acre to plants in the spring and summer to plants from early bud to flowering stage and to dormant plants in the fall.
- (5) **Mullein:** Apply to the rosette stage.
- (6) **Tropical soda apple:** Apply Milestone at 5 to 7 fl oz per acre at any growth stage, but application by flowering will reduce seed production potential.
- (7) **Malta, purple, and Yellow starthistle:** Apply Milestone at 3 to 5 fl oz per acre to plants at the rosette through bolting growth stages.
- (8) **Bull, musk, and plumeless thistles:** Apply Milestone at 3 to 5 fl oz per acre in the spring and early summer to rosette or bolting plants or in the fall to seedlings and rosettes. Apply at 4 to 5 fl oz when plants are at the late bolt through early flowering growth stages. 2,4-D at 1 lb ae/acre should be tank-mixed with Milestone starting at the late bud stages.
- (9) **Canada thistle:** Apply Milestone at 5 to 7 fl oz per acre either in the spring to plants in the prebud to early bud growth stage – the goal is to insure all plants have emerged. Applications are also effective in the fall before a killing frost.
- (10) **Absinth wormwood:** Apply 6 to 7 fl oz per acre before wormwood is 12 inches tall. When applying by air on CRP, coverage is important and a minimum of 3 GPA is specified. Remove old duff and litter by fire or mowing for best results.

### Precautions for Avoiding Spray Drift

Avoid application under conditions that may allow spray drift because very small quantities of spray, which may not be visible, may injure susceptible crops. This product should be applied only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, non-target crops and other plants) is minimal (e.g., when wind is blowing away from the sensitive areas). A drift control aid may be added to the spray solution to further reduce the potential for drift. If a drift control aid is used, follow the use directions and precautions on the manufacturer's label. Do not use a thickening agent with Microfoam, Thru-Valve booms, or other spray delivery systems that cannot accommodate thickened spray solutions.

**Ground Equipment:** With ground equipment spray drift can be reduced by keeping the spray boom as low as possible; by applying 10 gallons or more of spray per acre; by keeping the operating spray pressures at the manufacturer's specified minimum pressures for the specific nozzle type used (low pressure nozzles are available from spray equipment manufacturers); and by spraying when the wind velocity is low (follow state regulations). Avoid calm conditions which may be conducive to thermal inversions. Direct sprays no higher than the tops of target vegetation and keep spray pressures low enough to provide coarse spray droplets to minimize drift.

**Aerial Application:** Avoid spray drift at the application site. The interaction of many equipment and weather-related factors determine the potential for spray drift. Users are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications:

1. The distance of the outer most operating nozzles on the boom must not exceed 75% of wingspan or 85% of the rotor diameter.
2. Nozzles should be pointed backward parallel with the air stream or not pointed downwards more than 45 degrees.

State regulations must be followed.

The applicator should be familiar with and take into account the information covered in the following **Aerial Drift Reduction Advisory**. This information is advisory in nature and does not supersede mandatory label requirements.

### Aerial Drift Reduction Advisory

**Information on Droplet Size:** The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

#### Controlling Droplet Size:

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

- **Pressure** - Do not exceed the nozzle manufacturer's specified pressures. For many nozzle types lower pressure produces larger droplets. 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 will provide uniform coverage.
- **Nozzle Orientation** - Orient nozzles so that the spray is released parallel to the airstream to produce larger droplets than other orientations. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

**Boom Length:** The distance of the outer most operating nozzles on the boom must not exceed 75% of wingspan or 85% of rotor diameter.

**Application Height:** Applications should not be made at a height greater than 10 feet above the top of the tallest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment:** When applications are made with a crosswind, 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 of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

**Wind:** Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should 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. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions:** Applications should not occur during a local, low level 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 morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of the 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.

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### Terms and Conditions of Use

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If terms of the following Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. To the extent permitted by law, otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

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### Warranty Disclaimer

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Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. To the extent permitted by law, Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

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### Inherent Risks of Use

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It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. To the extent permitted by law, all such risks shall be assumed by buyer.

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### Limitation of Remedies

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To the extent permitted by law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used.

To the extent permitted by law, Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

\*Trademark of Dow AgroSciences LLC

Produced for  
Dow AgroSciences LLC  
Indianapolis, IN 46268

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EPA accepted 12/4/09

### Revisions:

1. Added advisory and graphics to prevent injury to desirable plants
2. Added restrictions on grasses grown for hay intended for export, grasses grown for seed, turf, and poisonous plants
3. Revised Storage and Disposal



# Specimen Label



Dow AgroSciences



**HERBICIDE**

\*Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

For control of annual and perennial weeds and woody plants in natural and production (plantations), forests for site preparation, mid-rotation release treatments, timber stand improvement activities, noncrop sites including industrial sites, rights-of-way (including roadsides, electric utility and communication transmission lines, pipelines, railroads, airports), irrigation and drainage ditches, canals, reservoirs, natural areas (including wildlife management areas, wildlife openings, wildlife habitats and refuges, parks and recreational areas, campgrounds, trailheads and trails), rangeland, and in and around aquatic sites and wetlands; also for perennial grass release, and grass growth suppression and grazed areas on these sites.

Avoid contact of herbicide with foliage, green stems, exposed non-woody roots or fruit of crops, desirable plants and trees, because severe injury or destruction may result.

Group	Percentage	HERBICIDE
Active Ingredient:		
glyphosate† N-(phosphonomethyl)glycine, isopropylamine salt	53.8%	
Other Ingredients	46.2%	
Total	100.0%	

†Contains 5.4 lb per gallon glyphosate, isopropylamine salt (4 lb per gallon glyphosate acid).

## Precautionary Statements

### Hazards to Humans and Domestic Animals

EPA Reg. No. 62719-324

## CAUTION

Harmful if Inhaled

Avoid breathing spray mist. Remove contaminated clothing and wash before reuse. Wash thoroughly with soap and water after handling.

### Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks.

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

### Engineering Controls

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

## User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

## First Aid

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably 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 contact 1-800-882-5884 for emergency medical treatment information.

## Environmental Hazards

Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Treatment of aquatic weeds can result in oxygen depletion or loss due to decomposition of dead plants. This oxygen loss can cause fish suffocation.

In case of leak or spill, soak up and remove to a landfill.

## Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

**Do not mix, store or apply this product or spray solutions of this product in galvanized steel or unlined steel (except stainless steel) containers or spray tanks.** This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas, which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

## 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.

**This is an end-use product. Dow AgroSciences does not intend and has not registered it for reformulation.**

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

## Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

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

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

## Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried.

## Storage and Disposal

Do not contaminate water, food, feed or seed by storage or disposal. **Pesticide Storage:** Store above 10°F (-12°C) to keep product from crystallizing. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 88°F (28°C) for several days to redissolve and roll or shake container or recirculate in mini-bulk containers to mix well before using.

**Pesticide Disposal:** Wastes resulting from use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures.

### Nonrefillable containers 5 gallons or less:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) 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 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

### Refillable containers larger than 5 gallons:

**Container Handling:** 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 a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two 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 puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

### Nonrefillable containers 5 gallons or larger:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 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. 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

## Product Information

This product is a broad spectrum, systemic, postemergent herbicide with no soil residual activity. It is intended for control of annual and perennial weeds and woody plants and brush. It is formulated as a water soluble liquid.

**Time to Symptoms:** The active ingredient in this product moves through the plant from the point of foliage contact to and into the root system. Visible effects are a gradual wilting and yellowing of the plant that advances to complete browning of above ground growth and deterioration of underground plant parts. Visible effects on most annual weeds occur within two to four days, but on most perennial weeds visible effects may not occur for seven days or more. Extremely cool or cloudy weather

following treatment may slow the activity of this product and delay development of visual symptoms.

**Stage of Weeds:** Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the annual, perennial and woody brush and trees rate tables for specific weeds. Always use the higher rate within the rate range for heavy or dense weed growth or when weeds are growing in an undisturbed (noncultivated) area. When treating weeds with disease or insect damage, weeds heavily covered with dust, or weeds under poor growing conditions, reduced weed control may result.

**Cultural Considerations:** Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the specified stage for treatment.

**Rainfastness:** Heavy rainfall soon after application may wash off this product from the foliage and a repeat application may be required for adequate control.

**Spray Coverage:** For best results, spray coverage should be uniform and complete.

**Mode of Action:** The active ingredient in this product inhibits an enzyme. This enzyme is found only in plants and microorganisms that are essential to forming specific amino acids.

**No Soil Activity:** Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or rootstocks of perennials will not be affected by the herbicide and will continue to grow.

**Biological Degradation:** Degradation of this product is primarily a biological process carried out by soil microbes.

**Maximum Application Rates:** The maximum application rates specified in this label are given in units of volume, either fluid ounces, pints or quarts, of this product per acre. The maximum allowed application rates apply to this product combined with the use of any and all other glyphosate- or sulfosate-containing herbicides, either applied separately or in a tank mix, on the basis of total pounds of glyphosate (acid equivalents) per acre. If more than one glyphosate- or sulfosate-containing product is applied to the same site within the same year, ensure that the total of pounds acid equivalent glyphosate does not exceed the maximum allowed.

Do not apply more than 8 quarts of this product (8 lb glyphosate acid) per acre per year for all use sites listed on this label.

**IMPORTANT:** When using this product, unless otherwise specified, mix with a surfactant, such as a nonionic surfactant containing 80% or greater active ingredient. For conifer release (pine release) use only surfactants that are approved for conifer release and specified on the surfactant label as safe for use in conifer release (pine release). Use of this product without surfactant will result in reduced herbicide performance. Ammonium sulfate, drift control additives, or dyes and colorants may be used. See Mixing Directions and the surfactant manufacturer's label for more information.

**Grazing Restrictions:** This product may be used to treat undesirable vegetation in utility rights-of-way that pass through pastures, rangeland, and forestry sites that are being grazed. For tank mix applications, comply with all restrictions appearing on the tank mix product label.

Except for lactating dairy animals there are no grazing restrictions following the labeled applications of this product.

For lactating dairy animals there are no grazing restrictions for the following labeled applications of this product:

- Where the spray can be directed onto undesirable woody brush and trees, including in handgun spray to wet or low volume directed spray treatments.
- For tree injection of frill applications and for cut stump treatments.

For broadcast applications, observe the following restrictions for lactating dairy animals:

- For application rates between 4.5 and 7.5 quarts per acre, no more than 15 percent of the available grazing area may be treated.
- For application rates less than 4.5 quarts per acre, no more than 25 percent of the available grazing area may be treated.

These restrictions do not apply to pastures, rangeland or forestry sites outside of utility rights-of-way.

## Herbicide Resistance Management

Glyphosate, the active ingredient in this product, is a group 9 herbicide (inhibitor of EPSP synthase). Some naturally occurring weed biotypes that are tolerant (resistant) to glyphosate may exist due to genetic variability in a weed population. Where resistant biotypes exist, the repeated use

of herbicides with the same mode of action can lead to the selection for resistant weeds. Certain agronomic practices reduce the likelihood that resistant weed populations will develop, and can be utilized to manage weed resistance once it occurs.

To delay the selection for glyphosate resistant weeds, use the following practices:

- Scout fields before and after application to detect weed escapes or shifts in weed species.
- Start with a clean field by applying a burndown herbicide or by tillage.
- Control weeds early when they are small.
- Add other herbicides, including a selective and/or a residual herbicide, and cultural practices, including tillage or crop rotation, where appropriate.
- Use the application rate for the most difficult to control weed in the field. Do not tank mix with other herbicides that reduce this product's efficacy through antagonism or with ones that encourage application rates of this product below those specified on this label.
- Control weed escapes and prevent weeds from setting seeds.
- In situations where resistant weeds are a problem, before moving from one site to another, clean equipment to minimize the spread of weed seeds or plant parts.
- Use new commercial seed that is as free of weed seed as possible.
- Report any incidence of repeated non-performance of this product against a particular weed species to the local retailer, county extension agent, or Dow AgroSciences representative.

The following good agronomic practices are recommended to reduce the spread of confirmed glyphosate-resistant biotypes:

- Tank mix this product or apply it sequentially with an appropriately labeled herbicide with a different mode of action to achieve control if a naturally occurring resistant biotype is present in the site.
- Cultural and mechanical control practices, including crop rotation or tillage, may also be used.
- To control weed escapes, including resistant biotypes, before they set seed, scout treated sites after applying this product.
- Thoroughly clean equipment before leaving any site known to contain resistant biotypes.

Because the presence of glyphosate resistance in weed populations is difficult to detect prior to use, Dow AgroSciences accepts no liability for any losses that may result from the failure of this product to control glyphosate-resistant weeds.

## Attention

**Avoid contact of herbicide with foliage, green stems, exposed non-woody roots or fruit of crops, desirable plants and trees, because severe injury or destruction may result.**

**AVOID DRIFT. Use extreme care when applying this product to prevent injury to desirable plants and crops.**

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing, or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift. **Avoid applying at excessive speed or pressure.**

**NOTE:** Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences. Keep container closed to prevent spills and contamination.

## Spray Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

- The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

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

The applicator must be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory.

## Aerial Drift Reduction Advisory

**This section is advisory in nature and does not supersede the mandatory label requirements.**

**Importance of Droplet Size:** The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent adverse effects from drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

### Controlling Droplet Size:

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Do not exceed the nozzle manufacturer's recommended pressures. Use the lower spray pressures for the nozzle. 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 parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

**Boom Length:** For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application Height:** Applications must not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment:** When applications are made with a crosswind, 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 of the aircraft upwind. Swath adjustment distance must increase with increasing drift potential (higher wind, smaller drops, etc.).

**Wind:** Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Do not apply this product when wind speed is below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should 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. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions:** Do not apply this product during a 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 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 upwards and rapidly dissipates indicates good vertical air mixing.

**Sensitive Areas:** Apply this pesticide only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

## Mixing Directions

Use only clean, stainless steel, fiberglass, plastic or plastic-lined steel containers to mix, store and apply spray solutions of this product. Do not mix, store or apply this product or spray solutions of this product in galvanized steel or unlined steel, except stainless steel, containers or spray tanks.

Eliminate any risk of siphoning the contents of the tank mix back into the carrier source while mixing. Use approved anti-back-siphoning devices where required by state or local regulations.

**Note:** Reduced results may occur if water containing soil is used, including visibly muddy water or water from ponds and ditches that is not clear.

#### **Rodeo – Alone**

This product mixes readily with water. Mix spray solutions of this product as follows:

1. Fill the mixing or spray tank with the required amount of clean water.
2. Add the specified amount of this product and nonionic surfactant near the end of the filling process and mix well.
3. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foaming, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

#### **Rodeo – Tank Mix**

This product does not provide residual weed control. For residual weed control or an alternate mode of action, tank mix this product with other herbicides. Read and carefully observe the precautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

Under certain conditions, at certain growth stages, and/or under other circumstances, some tank mix products have the potential to cause injury. Read all labels for products used in the tank mix prior to using them to determine the potential for crop injury.

Tank mixing with other herbicides, insecticides, fungicides, micronutrients or foliar fertilizers may result in reduced weed control or injury. Do not use these products in applications with this product unless otherwise noted in this label. Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly specified in this labeling. Mixing this product with herbicides or other materials not specified on this label may result in reduced performance.

The user is responsible for ensuring that the specific application being made is included on the label of the product used in the tank mix when a tank mixture with a generic active ingredient, including 2,4-D, atrazine, dicamba, diuron, or pendimethalin, is used.

Read all individual product labels for all products in the tank mix and observe all precautions and restrictions on the label. Use according to the most restrictive directions for each product in the tank mix. Always predetermine the compatibility of all tank mix products, together in the carrier, by mixing small proportional quantities in advance of mixing and applying them to the use site. Add the tank mix product to the tank as directed by the label. Maintain agitation and add the required amount of this product.

Maintain good agitation at all times until the contents in the tank are sprayed. If the mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying resumes. Keep the bypass line on or near the bottom of the tank to minimize foaming. The screen size in the nozzle or line strainers must be no finer than 50 mesh.

**Note:** If tank mixing with Garlon® 3A herbicide, ensure that Garlon 3A is well mixed with at least 75 percent of the total spray volume before adding this product to the spray tank to avoid incompatibility.

#### **Hand-Held Sprayers**

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

#### **Nonionic Surfactant**

When using this product, unless otherwise specified, mix with a surfactant, including a nonionic surfactant containing 80% or more active ingredient. For conifer release (pine release), use only surfactants that are approved for conifer release and specified on the surfactant label as safe for use in conifer release. Using this product without surfactant will result in reduced herbicide performance.

#### **Colorants or Dyes**

Agriculturally-approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's directions.

#### **Drift Control Additives**

Drift control additives may be used with all equipment types except wiper applicators, sponge bars and CDA equipment. When a drift control additive is used, read and carefully observe the precautionary statements and all other information appearing on the additive label.

## **Application Equipment and Application Methods**

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

Apply spray solutions in properly maintained and calibrated equipment capable of delivering desired volumes.

This product may be applied with the following application equipment and application methods.

#### **Aerial Application**

**Equipment:** Fixed wing and helicopter

**Do not apply this product using aerial spray equipment except under conditions as specified within this label.**

**Avoid drift.** Do not apply when winds are gusty or under any other condition which favors drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, maintain appropriate buffer zones.

Do not directly apply to any body of water.

Use the specified rates of this herbicide in 3 to 25 gallons of water per acre unless otherwise specified on this label. Refer to the specific use directions of this label for volumes and application rates.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations that dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure. A drift control additive may be used. When a drift control additive is used, carefully read and observe the precautionary statements and all other information specified on the additive label.

**Ensure uniform application.** To avoid streaked, uneven or overlapped application, use appropriate marking devices.

#### **Aerial Application Restrictions in California Only**

**AVOID DRIFT:** Do not apply when winds are gusty or under any other condition which favors drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

Do not aerially apply this product in a tank mix with dicamba in California.

Make aerial applications with helicopter only. To ensure uniform application, avoid streaking, uneven, or overlapped application, and use appropriate marking devices.

Use the following guidelines when aerial applications are made near crops or desirable perennial vegetation after budbreak and before total leaf drop, and/or near other desirable vegetation or annual crops:

- Do not apply this product using aerial equipment in residential areas.
- Do not apply within 100 feet of all desirable vegetation or crop(s).
- If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within 500 feet of the desirable vegetation or crop(s).
- Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crop(s) may require buffer zones in excess of the 500-foot minimum buffer.
- Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.

Use only coarse sprays to minimize drift. Do not use nozzles or nozzle configurations that dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure above the manufacturer's directions.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. Prolonged exposure of this product to uncoated steel surfaces may result in corrosion and possible failure of the part. Landing gear is most susceptible. The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion.

#### **ADDITIONAL LIMITATIONS FOR AERIAL APPLICATION IN FRESNO COUNTY, CALIFORNIA ONLY**

Always read and follow the label directions and precautionary statements for all products used in the aerial application.

The following information applies only from February 15 through March 31 within the following boundaries of Fresno County, California:  
North: Fresno County line  
South: Fresno County line  
East: State Highway 99 West

Observe the following directions to minimize off-site movement during aerial application of this product. Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor and aerial applicator.

#### Written Directions

Written directions MUST be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. These written directions MUST state the proximity of surrounding crops and that conditions of each manufacturer's product label and this label have been satisfied.

#### Aerial Applicator Training and Equipment

Aerial application of this product is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, certified in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to insure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved fly-ins constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Fresno County Agricultural Commissioner.

**Applications at Night** – Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

To report known or suspected misuse of this product, call 1-800-332-9111. For additional information on the proper aerial application of this product in Fresno County, call 916-784-1718.

#### Aquatic and Noncrop Sites

When this product is applied under the conditions described, it controls or partially controls the labeled weeds growing in the following industrial, recreational, and public areas or other similar sites.

Aquatic sites includes all bodies of fresh and brackish water that may be flowing, nonflowing, or transient including lakes, rivers, streams, ponds, scops, irrigation and drainage ditches, canals, reservoirs, estuaries and similar sites.

If aquatic sites are present in the noncrop area and are part of the intended treatment, read and observe the following directions:

- This product does not control plants that are completely submerged or have a majority of their foliage under water.
- There is no restriction on the use of treated water for irrigation, recreation, or domestic purposes.
- Consult local and state fish and game agency and water control authorities before applying this product to public water. Permits may be required to treat such water.
- To make aquatic applications around and within 1/2 mile of active potable water intakes, the water intake must be turned off for a minimum period of 48 hours after the application. The water intake may be turned on prior to 48 hours if the glyphosate level in the intake water is below 0.7 parts per million as determined by laboratory analysis. These aquatic applications may be made only in those cases where there are alternative water sources or holding ponds that would permit the turning off of an active potable water intake for a minimum period of 48 hours after the application.

#### Restrictions:

- Do not apply this product within 1/2 mile upstream of an active potable water intake in flowing water (i.e., river stream, etc.), or within 1/2 mile of an active potable water intake in a standing body of water, such as a lake, pond, or reservoir.

#### Spray Solution:

Desired Volume	Amount of This Product								
	0.5	0.75	1	1.25	1.5	2	5	8	10
1 gal	2/3 fl oz	1 fl oz	1 1/3 fl oz	1 2/3 fl oz	2 fl oz	2 2/3 fl oz	6 1/2 fl oz	10 1/4 fl oz	13 fl oz
25 gal	1 pt	1 1/2 pt	1 qt	1 1/4 qt	1 1/2 qt	2 qt	1 1/4 gal	2 gal	2 1/2 gal
100 gal	2 qt	3 qt	1 gal	1 1/4 gal	1 1/2 gal	2 gal	5 gal	8 gal	10 gal

2 Tablespoons = 1 fl oz

#### Ground Application

**Equipment:** Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

Use the specified rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified on this label. As density of weeds increases, increase the spray volume within the rate range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

#### Broadcast Application for Control of Undesirable Competitive Vegetation in Larch (*Larix* spp.) Plantations in Maine

Apply this product to control or reduce competition from undesirable vegetation in Larch (*Larix* spp.) plantations in the state of Maine.

#### Application Timing

Apply only after lignification has occurred in 50% or more of the current year's terminal growth.

#### Application Directions

**Broadcast Spray:** Use 1 to 3 quarts of this product per acre. Apply in a total spray volume of 10 to 60 gallons per acre using ground equipment or 5 to 15 gallons per acre if applied aerially. Up to 30 fl oz of Entry II surfactant may be added.

**Directed Sprays:** This product may be applied as a directed spray for competitive release of larch. Avoid contact of spray drift, mist or drips with foliage, green bark or non-woody surface roots of desirable plants. See Application Equipment and Application Methods of the product label.

Injury to larch may occur, especially where spray patterns overlap or higher rates of this product or surfactant were applied. Damage can be accentuated if application is made when larch is actively growing or is under stress. Make applications only if some level of injury to larch is acceptable.

#### Hand-Held and High-Volume Including Backpack Application

**Equipment:** Knapsack and backpack sprayers, pump up pressure sprayers, hand guns, hand wands, mistblowers, lances, and other hand-held and motorized spray equipment used to direct the spray onto weed foliage. **Note:** This product is not registered in Arizona or California for use in mistblowers.

Apply to foliage of vegetation to be controlled. Do not spray to the point of runoff for applications made on a spray to wet basis. Use coarse sprays only. For best results, cover the top half of the plant and at least half of the total foliage. To ensure adequate spray coverage, spray both sides of large or tall woody brush and trees, when foliage is thick and dense, or where there are multiple sprouts.

**High Volume Sprays:** Prepare a 3/4 to 2 percent solution of this product in water, add a nonionic surfactant and apply to foliage of vegetation to be controlled. For specific rates of application and instructions for control of various annual and perennial weeds, see the Weeds Controlled section.

Make applications on a spray to wet basis with uniform and complete spray coverage. Do not spray to point of runoff.

**Low Volume Directed Sprays:** This product may be used as a 5 to 10 percent solution in low volume directed sprays for spot treatment of trees and brush. This treatment method is most effective in areas where there is a low density of undesirable trees or brush. If a straight stream nozzle is used, start the application at the top of the targeted vegetation and spray from top to bottom in a lateral zigzag motion. Ensure that at least 50 percent of the leaves are contacted by the spray solution. For flat fan and cone nozzles and with hand-directed mist blowers, mist the application over the foliage of the targeted vegetation. Treat small, open-branched trees only from one side. If the foliage is thick or there are multiple root sprouts, apply from several sides to ensure adequate spray coverage. Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table.

For best results when using knapsack sprayers, mix the specified amount of product with water in a larger container. Fill the knapsack sprayer with the solution and add the correct amount of surfactant.

#### Selective Equipment

**Equipment:** Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

Do not contact desirable vegetation with herbicide. Droplets, mist, foam, or splatter of the herbicide settling on desirable vegetation is likely to result in discoloration, stunting or destruction.

Better results are obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when the height of weeds varies so that not all weeds are contacted. If this occurs, repeat treatment may be necessary.

**Shielded and Hooded Applicators:** A shielded or hooded applicator directs the herbicide solution onto weeds while shielding desirable vegetation from the herbicide. Use nozzles that provide uniform coverage within the treated area. Keep shields on these sprayers adjusted to protect desirable vegetation. **Exercise extreme care to avoid contact of the herbicide with desirable vegetation.**

**Wiper Applicators:** Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed. Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation.

Adjust wiper applicators used over the top of desirable vegetation so that the wiper contact point is at least 2 inches above the desirable vegetation. Better results are obtained when more of the weed is exposed to the herbicide solution. Weeds should be a minimum of 6 inches above the desirable vegetation. Adjust the applicator height to ensure adequate contact with weeds as weeds not contacted by the herbicide solution will not be affected. Poor contact may occur when weeds are growing in dense clumps, in severe weed infestations, or when weed height varies dramatically. If this occurs, repeat treatment may be necessary.

Operate this equipment at ground speeds no more than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if two applications are made in opposite directions.

Droplets, mist, foam, or splatter of the herbicide settling onto desirable vegetation may result in discoloration, stunting or destruction. Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that on sloping ground the herbicide solution may migrate, causing dripping on the lower end and drying of the wipers on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a one-day period as reduced activity may result from use of leftover solutions. Clean wiper parts by thoroughly flushing with water immediately after using this product.

For best results, use a nonionic surfactant at a rate of 10 percent by volume of total herbicide solution for all wiper applications.

#### Injection Systems

**Equipment:** Aerial or ground injection sprayers.

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the concentrate of other products when using injection systems.

#### Controlled Droplet Applicator (CDA)

**Equipment:** Hand-held or boom-mounted applicators that produce a spray consisting of a narrow range of droplet sizes.

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount specified on this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 3 to 15 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20 percent solution of this product at a flow rate of 2 fl oz per minute and a walking speed of 1.5 mph (1 1/2 pints of product per acre). For control of perennial weeds, apply a 20 to 40 percent solution of this product at a flow rate of 2 fl oz per minute and a walking speed of 0.75 mph (3 to 6 pints of product per acre).

CDA equipment produces a spray pattern that is not easily visible. Exercise extreme care to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation as damage or destruction may result.

## Use Sites

Use this product in noncrop areas, including airports, apartment complexes, aquatic sites, Christmas tree farms, commercial sites, Conservation Reserve Program (CRP) areas, ditch banks, driveways, dry ditches, dry canals, fence rows, golf courses, greenhouses, habitat management, industrial areas, lumber yards, manufacturing sites, municipal sites, natural areas, office complexes, ornamentals, parking areas, parks, pastures, petroleum tank farms and pumping installations, plant nurseries, public areas, railroads, rangeland, recreation areas, utility rights-of-way, roadsides, shadehouses, sod or turf seed farms, sports complexes, storage areas, substations, turfgrass areas, utility sites, warehouse areas, wildlife habitat management areas, and in grazed areas on these sites.

## Aquatic Sites

This product may be applied to emerged weeds in all bodies of fresh and brackish water that may be flowing, nonflowing or transient including lakes, rivers, streams, ponds, estuaries, golf courses, greenhouses, habitat management, industrial areas, lumber yards, manufacturing sites, municipal sites, natural areas, office complexes, ornamentals, parking areas, parks, pastures, petroleum tank farms and pumping installations, plant nurseries, public areas, railroads, rangeland, recreation areas, utility rights-of-way, roadsides, shadehouses, sod or turf seed farms, sports complexes, storage areas, substations, turfgrass areas, utility sites, warehouse areas, wildlife habitat management areas, and in grazed areas on these sites.

If aquatic sites are present in the noncrop area and are part of the intended treatment, read and observe the following directions:

- This product does not control plants that are completely submerged or have a majority of their foliage under water.
- There is no restriction on the use of treated water for irrigation, recreation or domestic purposes.
- Consult local and state fish and game agency and water control authorities before applying this product to public water. Permits may be required to treat such water.
- To make aquatic applications around and within 1/2 mile of active potable water intakes, the water intake must be turned off for a minimum period of 48 hours after the application. The water intake may be turned on prior to 48 hours if the glyphosate level in the intake water is below 0.7 parts per million as determined by laboratory analysis. These aquatic applications may be made **only** in those cases where there are alternative water sources or holding ponds which would permit the turning off of an active potable water intake for a minimum period of 48 hours after the application.
- For treatments after draw downs of water or in dry ditches, allow 7 days or more after treatment before reintroduction of water to achieve maximum weed control. Apply this product within 1 day after draw down to ensure application to actively growing weeds.
- Floating mats of vegetation may require retreatment. Avoid wash off of sprayed foliage by spray boat or recreational boat backwash or by rainfall within 6 hours of application. Do not re-treat within 24 hours following the initial treatment.
- Applications made to moving bodies of water must be made while traveling upstream to prevent concentration of this herbicide in water. When making any bankside applications, do not overlap more than 1 foot into open water. Do not spray in bodies of water where woods do not exist. The maximum application rate of 7 1/2 pints per acre must not be exceeded in any single broadcast application that is being made over water.
- When emerged infestations require treatment of the total surface area of impounded water, treating the area in strips may avoid oxygen depletion due to decaying vegetation. Oxygen depletion may result in fish kill.

## Restrictions:

- Do not apply this product directly to water within 1/2 mile upstream of an active potable water intake in flowing water (i.e., river, stream, etc.), or within 1/2 mile of an active potable water intake in a standing body of water, such as a lake, pond or reservoir. This restriction does not apply to intermittent overspray of water in terrestrial use sites.

## Wetland Sites

This product may be applied to undesirable vegetation in and around water (aquatic areas) and wetlands found in forestry, utility rights-of-way sites or other sites listed on the label, including where these sites are adjacent to or surrounding domestic water supply reservoirs, supply streams, lakes and ponds.

If wetland sites are present, read and observe the following directions:

- There is no restriction on the use of treated water for irrigation, recreation or domestic purposes.
- Consult local public water control authorities before applying this product in and around public water. Permits may be required to treat in such areas.



### Restrictions:

- Do not apply this product directly to water within 1/2 mile upstream of an active potable water intake in flowing water (i.e., river, stream, etc.), or within 1/2 mile of an active potable water intake in a standing body of water, such as a lake, pond or reservoir. This restriction does not apply to intermittent inadvertent overspray of water in terrestrial use sites.
- Do not spray open bodies of water where woody brush, trees and herbaceous weeds do not exist. Do not apply more than 3 3/4 quarts per acre in a single over water broadcast application except in stream crossings in utility right-of-way or where applications will result in less than 20 percent of the total water area being treated. In either of these locations, any specified rate may be applied.

### Christmas Tree Plantations

#### Broadcast Application (Oregon and Washington Only)

Broadcast apply this product over the established Christmas tree species Douglas fir (*Pseudotsuga menziesii*), fir species (*Abies* spp.), pine species (*Pinus* spp.) (except eastern white, loblolly, longleaf, shortleaf, slash), and spruce species (*Picea* spp.). Use 1 quart of this product per acre in 5 to 30 gallons of water per acre. For best results, add up to 10 fl oz of Entry II surfactant per acre. If using a different surfactant, follow the manufacturer's directions for use and ensure conifer safety has been adequately tested for that surfactant. Apply after trees have completed at least a full growing season since planting or transplanting.

Apply only in the fall after the formation of the final conifer resting buds or in the spring prior to initial bud swell. Final resting buds must be fully hardened and in the dormant stage. Applying this product at any other time may result in unacceptable injury to the Christmas trees. Avoid spray pattern overlap as injury may occur.

In some areas, 1 to 2 quarts of this product per acre may be used. Consult your local representative for specific use instructions if rates greater than 1 quart per acre are required.

For best results, do not use drift control additives as they may increase injury to Christmas trees.

#### Precautions and Restrictions:

- Preharvest Interval:** Do not apply within 1 full year prior to tree harvest.
- Ensure that adequate buffers are maintained to prevent drift onto nearby desirable crops or vegetation.

### Cut Stump

Treat cut stumps in any noncrop site listed on this label. This product will control regrowth of freshly cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, make applications during periods of active growth and full leaf expansion.

When used according to directions for cut stump application, this product will control, partially control or suppress most woody brush and tree species, some of which are listed below:

Common Name	Scientific Name
elder	<i>Alnus</i> spp.
coyotebrush <sup>1</sup>	<i>Baccharis pilularis</i>
dogwood <sup>1</sup>	<i>Cornus</i> spp.
eucalyptus	<i>Eucalyptus</i> spp.
hickory <sup>1</sup>	<i>Carya</i> spp.
madrone, Pacific	<i>Arbutus menziesii</i>
maple <sup>1</sup>	<i>Acer</i> spp.
oak	<i>Quercus</i> spp.
popper tree, Brazilian	<i>Schinus torabanthifolius</i>
Australian-pine,	<i>Casuarina equisetifolia</i>
poplar <sup>1</sup>	<i>Populus</i> spp.
reed, giant	<i>Arundo donax</i>
saltcedar	<i>Tamarix ramosissima</i>
sweetgum <sup>1</sup>	<i>Liquidambar styraciflua</i>
sycamore <sup>1</sup>	<i>Platanus occidentalis</i>
tan oak	<i>Lithocarpus densiflorus</i>
willow	<i>Salix</i> spp.

<sup>1</sup> Do not use this product on these species in the state of California.

#### Precautions and Restrictions:

- Do not make cut stump applications when the roots of desirable woody brush or trees may be grafted to the roots of the cut stump. Some sprouts, stems, or trees may share the same root system.
- Adjacent trees that are of a similar age, height and spacing may indicate shared roots.
- Injury is likely to occur to non-treated stems or trees when one tree or more that shares a common root is treated.

### Injection and Frill (Woody Brush and Trees)

Woody vegetation may be controlled by injection or frill application of this product. Apply this product using suitable equipment that penetrates into the living tissue. Apply the equivalent of 1 mL of this product per each two to three inches of trunk diameter at breast height (DBH). This is best achieved by applying 50 to 100 percent concentration of this product either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying diluted material to a continuous frill or more closely spaced cuttings. Do not make any applications that allow runoff to occur from frilled or cut areas in species that exude sap freely. In species such as this, make frill or cuts at an oblique angle to produce a cupping effect and use a 100 percent undiluted concentration of this product. For best results, apply during periods of active growth and full leaf expansion.

This product controls the following woody species:

Common Name	Scientific Name
oak	<i>Quercus</i> spp.
poplar	<i>Populus</i> spp.
sweetgum	<i>Liquidambar styraciflua</i>
sycamore	<i>Platanus occidentalis</i>

This product suppresses the following woody species:

Common Name	Scientific Name
blackgum <sup>1</sup>	<i>Nyssa sylvatica</i>
dogwood	<i>Cornus</i> spp.
hickory	<i>Carya</i> spp.
maple, red	<i>Acer rubrum</i>

<sup>1</sup> Do not use this product on these species in the state of California.

### Forestry Site Preparation

This product is for the control or partial control of woody brush, trees, and herbaceous weeds in forestry. This product is also for use in preparing or establishing wildlife openings within these sites and maintaining logging roads.

In forestry sites, use this product in site preparation prior to planting any tree species including Christmas trees, eucalyptus, hybrid tree cultivars and silvicultural nursery sites. Unless otherwise specified, make applications of this product for control or partial control of herbaceous weeds, woody brush and trees listed in the Weeds Controlled section.

#### Application Rates

Method of Application	Rate	Spray Volume (gal/acre)
<b>Broadcast</b>		
aerial	1.5 - 7.5 qt/acre	5 - 30
ground		10 - 60
<b>Spray to Wet</b>		
handgun, backpack	0.75 - 2%	spray to wet
mistblower	by volume	
<b>Low Volume Directed Spray<sup>1</sup></b>		
handgun, backpack	6 - 10%	partial coverage
mistblower	by volume	

<sup>1</sup> For low volume directed spray applications, coverage should be uniform with at least 50% of the foliage contacted. For best results, coverage of the top one-half of the plant, including the growing tip, is important (over the top and down coverage). To ensure adequate spray coverage, spray all sides of large or tall woody brush and trees, when foliage is thick and dense, or where there are multiple dense or tall sprouts.

Use a higher rate in the rate range for control or partial control of woody brush, trees and hard to control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before leaf drop. Use increased rates within the rate range to control perennial herbaceous weeds from emergence up to the appearance of seedheads, flowers or berries. Use a lower rate in the rate range to control annual herbaceous weeds and actively growing perennial herbaceous weeds after seedheads, flowers or berries appear. Apply to foliage of actively growing annual herbaceous weeds anytime after emergence.

This product has no herbicidal or residual activity in the soil. Where repeat applications are necessary, do not apply more than 8 quarts of product per acre per year.

#### Tank Mixes

This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled. When tank mixing, read and observe applicable use directions, precautions and

limitations on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

**Note:** For forestry site preparation, make sure the tank mix product is approved for use prior to planting the desired species. Observe planting interval restrictions.

Any specified rate of this product may be used in a tank mix with the following products for forestry site preparation:

Product	Method of Application	Rate
Milestone VM <sup>1</sup>	broadcast <sup>2</sup>	5 – 7 fl oz/acre
Garlon 3A <sup>2</sup>		1 – 4 qt/acre
Garlon 4		
Arsenal Applicators Concentrate		2 – 16 fl oz/acre
Escort		1/2 – 1 1/2 oz/acre
Chopper		4 – 32 fl oz/acre
Oust XP		1 – 4 oz/acre
Arsenal Applicators Concentrate	spray to wet	1/32 – 1/2% by volume
Arsenal Applicators Concentrate	low volume directed spray	1/8 – 1/2% by volume

<sup>1</sup>Use Milestone VM only in those states that have a Special Local Need label for use in forestry.

<sup>2</sup>Ensure that Garlon 3A is thoroughly mixed with water before adding this product. Agitation is required while mixing this product with Garlon 3A to avoid compatibility problems.

<sup>3</sup>When using a tank mix partner, up to the maximum labeled rate for a treatment site may be applied in combination with this product.

For control of herbaceous weeds, use the lower specified tank mixture rates. For control of dense stands or difficult to control woody brush and trees, use the higher specified rates.

#### Aerial Application

Aerially apply this product by helicopter only in forestry sites. See Aerial Application in Application Equipment and Application Methods for more details.

#### Ground Application

Apply this product using suitable ground equipment for broadcast applications in forestry sites. See Ground Application in Application Equipment and Application Methods for more details. Unless otherwise specified, apply the specified rates of this product as a broadcast spray in sufficient spray volume to provide complete and uniform coverage of plant foliage. Check for even distribution throughout the spray pattern.

#### Hand-Held and Backpack Application

Apply this product using handgun and backpack equipment in forestry sites. See Hand-Held and Backpack Application in Application Equipment and Application Methods for more details. For spray to wet applications, coverage should be uniform and complete, but not to the point of runoff.

This product may be used for low volume directed sprays for spot treatment of trees and brush. It is most effective in areas where there is a low density of undesirable trees or brush. For flat fan and cone nozzles, spray the foliage of the targeted vegetation. Small, open branched trees need only be treated from one side. If the foliage is thick or there are multiple root sprouts, apply from several sides to ensure adequate spray coverage.

### Forestry Conifer and Hardwood Release

#### Directed Sprays and Selective Equipment

Apply this product as a directed spray or with selective equipment in forestry conifer and hardwood sites, including Christmas tree plantations and silvicultural nurseries. A surfactant must be used with this product. Use only surfactants approved for conifer release and specified on the surfactant label as safe for use in conifer release (pine release). Using this product without a surfactant will result in reduced herbicide performance. See Mixing Directions and Application Equipment and Application Methods sections.

Avoid contact of spray drift, mist or drips with foliage, green bark or non-woody surface roots of desirable plant species.

**Tank Mixes:** When tank mixing, read and observe applicable use directions, precautions and limitations on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture.

#### Broadcast Application Outside Area of Southeastern United States

Apply this product as a broadcast application for release of Douglas fir (*Pseudotsuga menziesii*), fir (*Abies* species), hemlock (*Tsuga* species), pines (*Pinus* species) (includes all species except loblolly, longleaf, shortleaf, or slash), and California redwood (*Sequoia* species) outside the area of the southeastern United States. Apply this product as a broadcast application only after formation of final conifer resting buds in the fall or prior to initial bud swelling in the spring. Note: Except where specified, make broadcast applications of this product only where conifers have been established for more than one year.

Injury may occur to conifers treated for release, especially where spray patterns overlap or the higher rates are applied. Damage can be accentuated if applications are made when conifers are actively growing, are under stress from drought, flood water, improper planting, insects, animal damage or diseases.

Apply 3/4 to 1 1/2 quarts per acre as a broadcast spray. Apply 3/4 to 1 1/8 quarts of this product per acre to release Douglas fir, pine and spruce species at the end of the first growing season (except California). Ensure all conifers are well hardened off.

A surfactant must be used with this product for optimum weed control. Use only surfactants approved for use in over the top release applications. Using this product without a surfactant will result in reduced herbicide performance. For best results, do not use a surfactant for release of hemlock species or California redwood. In mixed conifer stands, injury to these species may result if a surfactant is used. See Mixing Directions and Application Equipment and Application Methods sections.

For release of Douglas fir, a nonionic surfactant for over the top foliar spray may be used. To avoid possible conifer injury, use nonionic surfactants at 2 fl oz per acre at elevations above 1500 feet, or 1 fl oz per acre in the coastal range or at elevations below 1500 feet. Using a higher rate of surfactant may result in unacceptable conifer injury. Ensure the nonionic surfactant has been adequately tested for safety to Douglas fir before using.

**Tank Mixes with Oust XP:** Apply 3/4 to 1 1/2 quarts of this product with 1 to 3 oz of Oust XP per acre to release jack pine and white. Use 1 to 1 1/2 oz of Oust XP per acre with this product to release white pine. Make applications to actively growing weeds as a broadcast spray over the top of established conifers. Make applications after formation of conifer resting buds in the late summer or fall.

**Tank Mixes with Arsenal Applicators Concentrate:** Apply 3/4 to 1 1/8 quarts of this product with 2 to 6 fl oz of Arsenal Applicators Concentrate per acre to release Douglas fir. Apply 1 1/2 quarts of this product with 1 to 2 1/2 fl oz of Arsenal Applicators Concentrate per acre to release balsam fir and red spruce.

In **Maine and New Hampshire**, apply up to 2 1/4 quarts of this product per acre to control or suppress difficult to control hardwood species. For the release of red pine, balsam fir, red spruce, white spruce, Norway spruce, and black spruce with dense tough to control brush, and where maples make up a large component of the undesirable trees, this product may be tank mixed with 1 to 2 1/2 fl oz of Arsenal Applicators Concentrate and 1 to 3 oz of Oust XP per acre. Apply this mix as a broadcast spray.

#### Broadcast Application in Southeastern United States

Apply this product as a broadcast application for release of loblolly pine (*Pinus taeda*), eastern white pine (*Pinus strobus*), shortleaf pine (*Pinus echinata*), slash pine (*Pinus elliotii*), Virginia pine (*Pinus virginiana*), and longleaf pine (*Pinus palustris*) in the southeastern United States.

Apply 1 1/8 to 1 7/8 quarts of this product per acre as a broadcast spray during late summer or early fall after the conifers have hardened off. For applications at the end of the first growing season, use 3/4 quart of this product alone or in a tank mix.

**Tank Mixes with Arsenal Applicators Concentrate:** For conifer release, apply 3/4 to 1 1/2 quarts of this product with 2 to 16 fl oz of Arsenal Applicators Concentrate per acre as a broadcast spray. Use only on conifer species that are labeled for over the top spray for both products. Use the higher specified rates for dense tough to control wood brush and trees.

#### Herbaceous Release

When applied as directed, this product plus listed residual herbicides provide postemergence control of the annual weeds and control or suppression of the perennial weeds listed in this label, and residual control of the weeds listed in the residual herbicide label. Make applications to actively growing weeds as a broadcast spray over the top of labeled conifers.

Use a surfactant labeled for use in over the top herbaceous release applications. Using this product without a surfactant will result in reduced herbicide performance. See Mixing Directions and Application Equipment and Application Methods sections on this label.

Wood control may be reduced if spray solution water volumes exceed 25 gallons per acre for these treatments.

**Tank Mixes with Oust XP:** Apply 12 to 18 fl oz of this product with 2 to 4 oz of Oust XP per acre to release loblolly pines. Apply 9 to 12 fl oz of this product with 2 to 4 oz of Oust XP per acre to release slash pines.

**Tank Mix with Atrazine:** Apply 3/4 quarts of this product with 4 lb ai of atrazine per acre to release Douglas fir. Apply only over Douglas fir that has been established for at least one full growing season. Apply in the early spring, usually mid-March through early April. Injury will occur if applications are made after bud swell in the spring. For this use, do not add surfactant to the tank mix.

In Maine and New Hampshire, for release of red pine, balsam fir, red spruce, white spruce, Norway spruce, and black spruce with heavy grass and herbaceous weeds infesting the site, up to 2 1/4 quarts of this product per acre may be tank mixed with 1 to 3 oz of Oust XP to control grass, herbaceous weeds and woody brush. Apply this mix as a broadcast spray.

### Mid-Rotation Conifer Release and Spot Treatments for Crop Tree Release and Timber Stand Improvement

This product is applied as a ground broadcast or directed spray application for mid-rotation release applications under the canopy of pines (and other conifers) and hardwoods. Make applications using application techniques that prevent or minimize direct contact to the foliage of crop trees (including in stands of pine, other conifers, or hardwood). This may be accomplished using directed sprays and ground equipment with nozzles oriented to target only undesirable understory vegetation below the crop tree canopy. This product is applied as a spot, individual plant treatment for woody and herbaceous weeds (see Hand-Held and Backpack Application in Application Equipment and Application Methods section). When making spot applications, do not allow spray to contact the foliage of desirable crop trees.

### Noncrop Areas and Industrial Sites

See the rate tables in the Annual Weeds, Perennial Weeds, and Woody Brush and Trees sections for specific application rates. This product has no herbicidal or residual activity in the soil. Where repeat applications are necessary, do not apply more than 8 quarts of this product per acre per year.

Use a higher rate in the rate range for control or partial control of woody brush, trees, and hard to control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before fall color and leaf drop. Use increased rates within the rate range for difficult to control species, where dense stands occur, or where conditions for control are not ideal and to control perennial herbaceous weeds from emergence up to the appearance of seedheads, flowers or berries. Use a lower rate in the rate range to control annual herbaceous weeds and actively growing perennial herbaceous weeds after seedheads, flowers or berries appear. Apply to foliage of actively growing annual herbaceous weeds anytime after emergence.

#### Tank Mixing for Noncrop Areas

This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled. When tank mixing, read and observe applicable use directions, precautions and limitations on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

Maintain good agitation at all times during the mixing process and application. Ensure that the tank mix product(s) is well mixed with the spray solution before adding this product. Mix only the amount of spray solution that will be used during the same day. Reduced weed control may result if a tank mixture is allowed to stand overnight. If the spray mix is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

#### Weed Control, Trim and Edge, and Bare Ground

This product may be used in general noncrop and non-food areas. It may be applied with any application equipment described in this label. This product may be used to trim and edge around objects in noncrop sites, for spot treatment of unwanted vegetation, and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

To maintain bare ground, repeated applications of this product may be used.

This product provides control of emerged annual weeds and control or partial control of emerged perennial weeds, woody brush and trees when applied in a tank mix to bare ground.

### Turfgrass Renovation, Seed or Sod Production

This product controls most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. When repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm season turfgrass, including bermudagrass, summer or fall applications provide the best control. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray.

Do not disturb soil or underground plant parts before treatment. Delay tillage or renovation techniques, including vertical mowing, coring, or slicing, for seven days after application to allow translocation into underground plant parts.

Desirable turfgrass may be planted following the above procedures.

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

Do not feed or graze turfgrass grown for seed or sod production for eight weeks following application.

### Ornamentals and Plant Nurseries

#### Post-Direct and Trim and Edge

This product may be used as a post-directed spray around established woody ornamental species, including arborvitae, azalea, boxwood, crabapple, euonymus, fir, Douglas fir, jojoba, hollis, lilac, magnolia, maple, oak, privet, pine, spruce and yew. This product may also be used to trim and edge around trees, buildings, sidewalks and roads, potted plants and other objects in a nursery setting.

Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. Do not use this product for any over the top broadcast spray in ornamentals. Exercise care to avoid contact of spray, drift or mist with foliage or green bark of established ornamental species.

#### Site Preparation

This product may be used prior to planting any ornamental, nursery or Christmas tree species.

#### Greenhouse/Shadehouse

This product may be used to control weeds growing in and around greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off.

### Wildlife Habitat Management

This product may be used to control exotic and other undesirable vegetation in habitat management and natural areas, including rangeland and wildlife refuges. Apply to allow recovery of native plant species, prior to planting desirable native species, and for broad spectrum vegetation control. Apply spot treatments to selectively remove unwanted plants for habitat enhancement.

#### Wildlife Food Plots

This product may be used as a site preparation treatment to control annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after application before tilling to allow translocation into underground plant parts.

### Hollow Stem Injection

Apply this product to control giant knotweed (*Polygonum sachalinense*), Japanese knotweed (*Polygonum cuspidatum*), or other invasive knotweeds using individual stem treatment. Use a hand-held injection device that delivers the specified amount of this product into these hollow stem plants.

Make a hole through both sides of the stem about 6 inches above the ground, just below a node, using an awl or other pointed tool. Inject 5 mL of undiluted product directly into this hole in the hollow stem. Treat each stem of the knotweed plant.

#### Restrictions:

- Do not apply more than a total of 8 quarts of this product per acre for all treatments combined. At 5 mL per stem, 8 quarts will treat approximately 1420 stems per acre.

### Parks, Recreational and Residential Areas

Use this product in parks, recreational and residential areas. Apply it with any application equipment described in this label. Use this product to

trim and edge around trees, fences, paths, around buildings, sidewalks, and other objects in these areas. This product may be used for spot treatment of unwanted vegetation, eliminate unwanted weeds growing in established shrub beds or ornamental plantings, and prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

All of the label instructions apply to park and recreational areas.

### Railroads

All of the instructions in the Noncrop Areas and Industrial Sites and Roadside sections apply to railroads.

### Bare Ground, Ballast and Shoulders, Crossings, and Spot Treatment

Use this product to maintain bare ground on railroad ballast and shoulders. Repeat applications of this product may be used as weeds emerge to maintain bare ground. Use this product to control tall growing weeds to improve line of sight at railroad crossings and reduce the need for mowing along rights-of-way.

### Brush Control

Apply 3 to 8 quarts of this product per acre as a broadcast spray, using boom-type or boomless nozzles. Applications up to 80 gallons of spray solution per acre may be used. Apply a 3/4 to 1.5 percent solution of this product when using high volume spray to wet applications. Apply a 5 to 10 percent solution of this product when using low volume directed sprays for spot treatment.

### Roadsides

All of the instructions in the Noncrop Areas and Industrial Sites and Roadside sections apply to roadsides.

### Shoulder Treatments

Use this product on road shoulders. Apply it with boom sprayers, shielded boom sprayers, high volume off-center nozzles, OC nozzle clusters, manifold nozzle systems, hand-held equipment, and similar equipment, and under-deck mowing plus herbicide systems.

### Guardrails and Other Obstacles to Mowing

Use this product to control weeds growing under guardrails and around signposts and other objects along the roadside.

### Spot Treatment

Use this product as a spot treatment to control unwanted vegetation growing along roadsides.

**Tank Mixes:** This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled and for residual weed control. Follow applicable use directions, precautions and limitations on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

### Chemical Mowing

**Perennials:** This product suppresses perennial grasses listed in this section to serve as a substitute for mowing. Use 4.5 fl oz of this product per acre when treating Kentucky bluegrass, tall fescue, fine fescue, orchardgrass, or quackgrass. Apply 12 fl oz of this product per acre when treating bermudagrass. Apply 4.5 to 8 fl oz of this product per acre when treating bahiagrass. Use the higher rates when grass is under heat stress. Apply 3 pints of this product per acre when treating tarpedgrass or ryegrass. Apply treatments in 10 to 20 gallons of spray solution per acre.

**Annals:** For growth suppression of some annual grasses, including annual ryegrass, wild barley and wild oats growing in coarse turfgrass on roadsides or other industrial areas, apply 3 to 3.75 fl oz of this product in 10 to 40 gallons of spray solution per acre. Apply when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments may cause injury to the desired grasses.

### Release of Dormant Bermudagrass or Bahiagrass

Apply 8 to 48 fl oz of this product per acre in 10 to 40 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable groundcovers and where some temporary injury or discoloration can be tolerated. Treatments of more than 12 fl oz per acre may result in injury or delayed greenup in highly maintained areas, including golf courses and lawns.

For best results on winter annuals, treat when weeds are in an early growth stage (less than 6 inches in height) after most have germinated. For best results on tall fescue, treat when fescue is in or beyond the 4- to 8-leaf stage.

**Tank Mixes:** This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled and for residual weed control. When tank mixing, read and follow all applicable use directions, precautions, and limitation on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

### Actively Growing Bermudagrass

Use this product to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Use only in areas where some temporary injury or discoloration can be tolerated. Use only on well-established bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Repeat applications of the tank mix in the same season are not specified since severe injury may occur.

Apply up to 2.25 pints of this product in 30 to 40 gallons of spray solution per acre. Use the lower rate when treating annual weeds less than 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation.

### Actively Growing Bahiagrass

For suppression of vegetable growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4.5 fl oz of this product in 10 to 40 gallons of water per acre. Apply one to two weeks after full greenup or after mowing to a uniform height of 3 to 4 inches. Make this application prior to seedhead emergence. For suppression up to 120 days, apply 3 fl oz of this product per acre, followed by an application of 1.5 to 3 fl oz per acre about 45 days later. Make no more than two applications per year.

**Tank Mixes:** This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled and for residual weed control. When tank mixing, read and follow all applicable use directions, precautions, and limitation on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

### Utility Sites

Use this product for control of brush, tree, and weed control and side trimming in areas including electrical power, pipeline and telephone rights-of-ways, and other sites associated with these rights-of-ways including substations, roadsides, and railroads. This product may be applied with any application equipment or method described on this label unless specifically prohibited.

**Tank Mixes:** This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled and for residual weed control. When tank mixing, read and follow all applicable use directions, precautions, and limitation on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

### Rangelands

Use this product to control or suppress many annual weeds growing in perennial cool and warm season grass rangelands. Preventing weed seed production is critical to the successful control of annual grassy weeds invading these perennial grass sites. Eliminate most of the viable seeds with follow up applications in sequential years. Delay grazing of treated areas to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.

**Bromus:** Use this product to control or suppress downy brome/cheatgrass (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*), cheat (*Bromus secalinus*), cereal rye and jointed goatgrass. Apply 5 to 12 fl oz of this product per acre as a broadcast treatment.

For best results, coincide treatments with early seedhead emergence of the most mature plants. Delaying the application until this growth stage maximizes the emergence of other weedy grass flushes. Make applications to the same site each year until seed banks are depleted and the desirable perennial grasses become established on the site.

**Medusahead:** Apply 12 fl oz of this product per acre to control or suppress medusahead at the 3-leaf stage when plants are actively growing. Delaying applications beyond this stage results in reduced or unacceptable control. Repeat applications in subsequent years to eliminate the seed bank before reestablishing desirable perennial grasses. Apply in the fall or spring.

Apply by ground or air. Make aerial applications for these uses with fixed wing or helicopter equipment. For aerial applications, apply in 2 to 10 gallons of water per acre. For ground applications, apply in at least 10 to 20 gallons of water per acre.

### Spot Treatment and Wiper Application

Apply this product in rangeland, pastures, or industrial sites as a spot treatment or over the top of desirable grasses using wiper applications to control tall weeds. See Wiper Application section for specific instructions. Make repeat applications in the same area at 30-day intervals.

The entire site or any portion of it may be treated when using 2.25 quarts or less of this product per acre for spot treatments or wiper applications. No more than 10 percent of the total site may be treated at any one time when using more than 2.25 quarts of this product per acre for spot treatments or wiper applications. To achieve maximum performance, remove domestic livestock before application and wait 7 days after application before grazing livestock or harvesting for feed.

## Pastures

**Type of Pastures:** Bahiagrass, bermudagrass, bluegrass, bromie, fescue, orchardgrass, ryegrass, timothy, wheatgrass, alfalfa, clover

### Spot Treatment and Wiper Application

This product may be applied as a spot treatment or as a wiper application. Make applications in the same area at 30-day intervals. See Wiper Application section for specific instructions.

### Precautions and Restrictions:

- For spot treatment and wiper applications, the entire field or any portion of it may be treated when using a rate of 2.25 quarts or less per acre.
- Do not treat more than 10 percent of any acre at one time if applying more than 2.25 quarts per acre as a spot treatment or wiper application.
- To achieve maximum performance, remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

### Preplant, Preemergence, and Pasture Renovation

Apply this product prior to planting or emergence of forage grasses and legumes. In addition, this product may be used to control perennial pasture species listed on this label prior to re-planting.

### Precautions and Restrictions:

- If the application rates total 2.25 quarts or less per acre, there is no waiting period between treatment and feeding or livestock grazing is required.
- If the application rates total more than 2.25 quarts per acre, remove domestic livestock before application and wait eight weeks after application before grazing or harvesting.
- Crops listed for treatment in this label may be planted into the treated area at any time. Wait 30 days between application and planting for all other crops.

## Bamboo

Use this product on roadside rights-of way to control or suppress bamboo. Use the higher rate in the rate range for dense stands and larger plants. Mow or cut bamboo and allow it to resprout to have sufficient foliage in order for the spray solution to completely cover the foliage. Optimum control or suppression of bamboo is achieved when this product is applied between August and October (prior to frost). One application of this product plus a surfactant will not eradicate bamboo. Several mowings and applications are required to completely control bamboo.

Apply the specified rate plus a surfactant (1/4 to 1/2% w/v), such as a nonionic surfactant containing 80% active ingredient or more. Using this product without a surfactant results in reduced performance.

Application Method	Rate	Spray Volume (gal/acre)
ground broadcast	1.5 – 7.5 qt/acre	10 - 60
handgun spray to wet	0.75 - 2%	spray to wet
handgun or backpack low volume directed spray	4 – 10%	spray to cover

### Restrictions:

- Do not apply more than a total of 8 quarts of this product per acre per year.

## Annual Weeds, Perennial Weeds, and Woody Brush and Trees

### Annual Weeds

Apply 24 fl oz of this product per acre if weeds are less than 6 inches in height or runner length. Use 1.25 to 3 quarts of this product per acre if weeds are more than 6 inches in height or runner length or when weeds are growing under stressed conditions. Use a higher rate in the rate range for tough to control species regardless of the size of the weed at the time of application. Treat tough to control weeds when they are relatively small. Tank mix this product with only those products that are labeled for application at the target site. Refer to the label of the tank mix partner for use sites and application rates.

Apply a 0.4 percent solution of this product as a spray to wet application to weeds less than 6 inches in height or runner length.

Use a 0.7 to 1.5 percent solution for annual weeds more than 6 inches tall or for smaller weeds growing under stressed conditions. Use the higher concentration for tough to control species or for weeds more than 24 inches tall. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds.

Use a 4 to 7 percent solution of this product for low volume directed spray applications. Spray coverage should be uniform with at least 50 percent of the foliage contacted. For best results, cover the top one-half of the plant. To ensure adequate spray coverage, spray both sides of large or tall weeds when foliage is thick and dense or where there are multiple sprouts.

### Common Name

anoda, spured  
balsamapple<sup>1</sup>  
barley  
barleygrass  
bassia, fivehook  
bittoncross  
bluegrass, annual  
bluegrass, bulbous  
bromie, downy/cheatgrass  
bromie, Japanese  
buttercup  
Carolina foxtail  
Carolina geranium  
castorbean  
chamomile, mayweed  
cheat  
chervil  
chickweed  
cocklebur, common  
coveopsis, plains  
corn, volunteer  
crabgrass  
dwarfdandelion, Virginia  
eastern mannagrass  
eclipta  
false-dandelion  
falseflex, smallseed  
fiddleneck  
field pennycross  
fleabane, annual  
fleabane, hairy  
flacabanc, rough  
Florida pusley  
foxtail  
goatgrass, jointed  
goosegrass  
gruncisel, common  
henbit  
horseweed/marestail  
itchgrass  
johnsongrass  
junglelice  
knotweed  
kochia<sup>2</sup>  
lambquarters, common  
mallow, little  
medusahead  
morningglory  
mustard, blue  
mustard, tumble  
mustard, wild  
oats, wild  
panicum, fall  
pigweed, redroot  
pigweed, smooth  
prickly lettuce  
puncturevine  
purslane, common  
ragweed, common  
ragweed, giant  
rocket, London  
Ruslan-thistle  
rye, cereal  
ryegrass, Italian<sup>3</sup>  
sambur, field  
sesbania, hemp  
shattercane  
shepherd's-purse  
sicklepod  
signaigrass, broadleaf  
smartweed, Pennsylvania  
sowthistle, annual  
Spanishneedles<sup>4</sup>  
speedwell, corn  
spoodwall, purslane  
sprangletop  
spurge, annual

### Scientific Name

*Anoda cristata*  
*Momordica charantia*  
*Lolium vulgare*  
*Echinochloa crus-galli*  
*Bassia hyssopifolia*  
*Cardamine* spp.  
*Poa annua*  
*Poa bulbosa*  
*Bromus tectorum*  
*Bromus japonicus*  
*Ranunculus* spp.  
*Alpecurus carolinianus*  
*Geranium carolinianum*  
*Ricinus communis*  
*Anthemis cotula*  
*Bromus secalinus*  
*Anthriscus cerefolium*  
*Cerastium vulgatum*  
*Xanthium strumarium*  
*Cenocopsis fructaria*  
*Zea mays*  
*Digitaria* spp.  
*Krigia virginica*  
*Glyceria* spp.  
*Eclipta prostrata*  
*Pyrrhopappus carolinianus*  
*Camelina microcarpa*  
*Amsinckia* spp.  
*Thlaspi arvense*  
*Erigeron annuus*  
*Coryza bonariensis*  
*Erigeron strigosus*  
*Richardia scabra*  
*Setaria* spp.  
*Aegilops cylindrica*  
*Elymus indica*  
*Senecio vulgaris*  
*Lamium amplexicaule*  
*Coryza canadensis*  
*Rottboellia cochinchinensis*  
*Sorghum halepense*  
*Echinochloa colona*  
*Polygonum* spp.  
*Kochia scoparia*  
*Chenopodium album*  
*Malva parviflora*  
*Teeniathenum caput-medusae*  
*Ipomoea* spp.  
*Charispora tonella*  
*Sisymbrium altissimum*  
*Sinapis arvensis*  
*Avena fatua*  
*Panicum dichotomiflorum*  
*Amaranthus retroflexus*  
*Amaranthus hybridus*  
*Lactuca scariola*  
*Tribulus terrestris*  
*Portulaca oleracea*  
*Ambrosia artemisiifolia*  
*Ambrosia trifida*  
*Sisymbrium irio*  
*Salsola tragus*  
*Secale cereale*  
*Lolium perenne*  
*Cenchrus spinifex*  
*Sesbania herbacea*  
*Sorghum bicolor*  
*Capsella bursa-pastoris*  
*Senna obtusifolia*  
*Utrichloa platyphylla*  
*Polygonum pennsylvanicum*  
*Sonchus oleraceus*  
*Bidens bipinnata*  
*Veronica arvensis*  
*Veronica peregrina*  
*Leptochloa* spp.  
*Chamaesyce* spp.

**Common Name (Cont.)**

spurge, prostrate  
 spurge, spotted  
 spurry, umbrella  
 stinkgrass  
 sunflower, common  
 tansymustard, pinnate  
 teaweed/sida, prickly  
 Texas panicum  
 velvetleaf  
 Virginia pepperweed  
 wheat  
 witchgrass  
 woolly cupgrass  
 yellow rocket

<sup>1</sup>Apply with hand-held equipment only.

<sup>2</sup>Do not treat kochia in the button stage.

<sup>3</sup>Apply 3 pints of product per acre.

**Perennial Weeds**

Best results are obtained when perennial weeds are treated after they reach the reproductive stage of growth (seedhead initiation in grasses and bud formation in broadleaves). Best results are obtained when non-flowering plants are treated when they reach a mature stage of growth. In many situations, applications are required prior to these growth stages. Under these conditions, use a higher rate in the rate range.

When using spray to wet treatments with hand-held equipment, ensure thorough coverage of the plant. For best results, use a 1.5 percent solution on harder to control perennials including bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

Use a 4 to 7 percent solution of this product in low volume directed spray applications. Spray coverage should be uniform with at least 50 percent of the foliage contacted. For best results, cover the top one-half of the plant. To ensure adequate spray coverage, spray both sides of large or tall weeds when foliage is thick and dense or where there are multiple sprouts.

Allow 7 days or more after application before tillage.

**Common Name**

alfalfa  
 alligatorweed<sup>1</sup>  
 anise/fennel  
 artichoke, Jerusalem  
 bahiagrass  
 beachgrass, European  
 bentgrass  
 bermudagrass  
 blindweed, field  
 bluegrass, Kentucky  
 blueweed, Texas  
 brackenfern  
 bromia, smooth  
 bursage, woollyleaf  
 canarygrass, reed  
 cattail  
 clover, red  
 clover, white  
 cogongrass  
 cordgrass  
 cutgrass, giant<sup>1</sup>  
 dallisgrass  
 dandelion  
 dock, curly  
 dogbane, hemp  
 fescue  
 fescue, tall  
 German ivy  
 guineagrass  
 horsemint  
 horseradish  
 iceplant, crystalline  
 johnsongrass  
 kikuyugrass  
 knapweed, Russian  
 lantern, largeleaf  
 lespedeza, common  
 lespedeza, sericea  
 loasastrife, purple  
 lotus, American  
 maidencane  
 milkweed  
 mulch, wirestem  
 mullein, common  
 napiergrass  
 nightshade, silverleaf  
 nutsedge, purple  
 nutsedge, yellow  
 orchardgrass

**Scientific Name**

*Chamaesyce humistrata*  
*Chamaesyce maculata*  
*Holosteum umbellatum*  
*Eragrostis ciliaris*  
*Helianthus annuus*  
*Descurainia pinnata*  
*Sida spinosa*  
*Panicum* spp.  
*Abutilon theophrasti*  
*Lepidium virginicum*  
*Triticum aestivum*  
*Panicum capillare*  
*Eriochloa villosa*  
*Barbarea vulgaris*

**Scientific Name**

*Medicago sativa*  
*Ajitemanthera philoxeroides*  
*Foeniculum vulgare*  
*Helianthus tuberosus*  
*Paspalum notatum*  
*Ammophila arenaria*  
*Agrostis* spp.  
*Cynodon dactylon*  
*Convolvulus arvensis*  
*Poa pratensis*  
*Helianthus scaberrimus*  
*Pteridium aquilinum*  
*Bromus inermis*  
*Ambrosia grayi*  
*Phalaris arundinacea*  
*Typha* spp.  
*Trifolium pratense*  
*Trifolium repens*  
*Imperata cylindrica*  
*Spartina* spp.  
*Zizaniopsis miliacea*  
*Paspalum dilatatum*  
*Taraxacum officinale*  
*Rumex crispus*  
*Apocynum cannabinum*  
*Festuca* spp.  
*Lolium arundinaceum*  
*Senecio mikanoides*  
*Urochloa maxima*  
*Solanum carolinense*  
*Armoracia rusticana*  
*Mesembryanthemum crystallinum*  
*Sorghum halopense*  
*Pennisetum clandestinum*  
*Acroptilon repens*  
*Lantana camara*  
*Kummerowia striata*  
*Lespedeza cuneata*  
*Lythrum salicaria*  
*Nelumbo lutea*  
*Panicum hemitomon*  
*Asclepias* spp.  
*Muhlenbergia frondosa*  
*Verbascum thapsus*  
*Pennisetum purpureum*  
*Solanum elaeagnifolium*  
*Cyperus rotundus*  
*Cyperus esculentus*  
*Dactylis glomerata*

**Common Name**

pampasgrass  
 paragrass  
 phragmites<sup>2</sup>  
 poison-hemlock  
 quackgrass  
 reedvine  
 reed, giant  
 ryegrass, perennial  
 smartweed, swamp  
 sowthistle, perennial  
 spatterdock  
 starthistle, yellow  
 sweet potato, wild<sup>1</sup>  
 thistle, artichoke  
 thistle, Canada  
 timothy  
 torpedograss<sup>1</sup>  
 trumpetcreeper  
 tules, common  
 vaseygrass  
 velvetgrass  
 water fern<sup>1</sup>  
 waterhyacinth  
 waterlotus  
 waterprimrose  
 wheatgrass, western

<sup>1</sup> Partial control.

<sup>2</sup> Partial control in southeastern states.

<sup>3</sup> Not for use in California.

**Woody Brush and Trees**

Apply this product after full leaf expansion unless otherwise directed. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring or early summer when brush species are at high moisture content and are flowering.

Ensure thorough coverage when using hand-held equipment.

See Low Volume Directed Spray Application section of label. Spray coverage should be uniform with at least 50 percent of the foliage contacted. For best results, cover the top half to 2/3 of the plant foliage. Spray both sides of large or tall woody brush and trees to ensure adequate spray coverage when foliage is thick and dense or where there are multiple sprouts. Symptoms may not appear prior to frost or senescence with fall treatments.

Allow seven days or more after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

**Note:** If brush has been mowed or tilled, or trees have been cut, do not treat until regrowth has reached the specified stage of growth.

This product will control, partially control, or suppress the following woody brush and trees.

**Common Name**

alder  
 ash<sup>1</sup>  
 aspen, quaking  
 bearclover, bearmat  
 beach  
 birch  
 bittercherry  
 blackberry  
 blackgum  
 blue gum, Tasmanian  
 bracklenon  
 broom, French  
 broom, Scotch  
 buckwheat, California<sup>1</sup>  
 casahuate<sup>1</sup>  
 catclaw-vine<sup>1</sup>  
 ceanothus  
 chamise  
 cherry  
 cherry, black  
 cherry, pin  
 copperleaf, haphornbean  
 coyotebrush  
 deer vetch  
 dewberry, southern  
 dogwood

**Scientific Name**

*Alnus* spp.  
*Fraxinus* spp.  
*Populus tremuloides*  
*Ceanothus prostratus*  
*Fagus* spp.  
*Betula* spp.  
*Prunus emarginata*  
*Rubus* spp.  
*Myrica sylvatica*  
*Eucalyptus globulus*  
*Pteridium aquilinum*  
*Genista monspessulana*  
*Cytisus scoparius*  
*Eriogonum fasciculatum*  
*Fragaria virginiana*  
*Macfadyena unguis-cati*  
*Ceanothus* spp.  
*Adenostoma fasciculatum*  
*Prunus* spp.  
*Prunus serotina*  
*Prunus pennsylvanica*  
*Acalypha ostryfolia*  
*Raccharis pilularis*  
*Lotus uniflorus*  
*Rubus* spp.  
*Cornus* spp.



## Common Name (Cont.)

elderberry  
elm<sup>1</sup>  
gorse  
hasardia<sup>1</sup>  
hawthorn  
hazel  
hickory  
holly, Florida  
honeysuckle  
hornbeam, American  
kudzu  
locust, black<sup>1</sup>  
madrone, Pacific  
manzanita  
maple  
maple, red<sup>1</sup>  
maple, sugar  
maple, vlna<sup>1</sup>  
monkeyflower<sup>1</sup>  
oak  
oak, black<sup>2</sup>  
oak, pin  
oak, post  
oak, red  
oak, southern red  
oak, white<sup>1</sup>  
popportree, Brazilian  
persimmon<sup>1</sup>  
pine  
poison-ivy, eastern  
poison-oak  
poison-sumac<sup>1</sup>  
prunus  
raspberry  
redbud, eastern  
rose, multiflora  
Russet-olive  
sage, black, white  
sagebrush, California  
sambonberry  
saltcedar<sup>2</sup>  
saltbush, sea myrtle  
sassafras  
sourwood<sup>1</sup>  
sumac, smooth<sup>1</sup>  
sumac, dwarf<sup>1</sup>  
sweetgum  
swordfern<sup>1</sup>  
tallowtree, Chinese  
oak, tanbark resprouts  
thimbleberry, western  
tobacco, tree<sup>2</sup>  
trumpet creeper  
Virginia creeper<sup>1</sup>  
waxmyrtle, southern<sup>1</sup>  
willow  
yellow-poplar<sup>1</sup>  
yerba santa  
<sup>1</sup>Partial control

## Scientific Name

*Sambucus nigra*  
*Ulmus* spp.  
*Ulex europaeus*  
*Haplophragma squamosus*  
*Crataegus* spp.  
*Corylus* spp.  
*Carya* spp.  
*Schinus terebinthifolius*  
*Lonicera* spp.  
*Carpinus caroliniana*  
*Pueraria montana*  
*Robinia pseudoacacia*  
*Arbutus menziesii*  
*Arctostaphylos* spp.  
*Acer* spp.  
*Acer rubrum*  
*Acer saccharum*  
*Acer circinatum*  
*Minutulus guttatus*  
*Quercus* spp.  
*Quercus kelloggii*  
*Quercus palustris*  
*Quercus stellata*  
*Quercus rubra*  
*Quercus falcata*  
*Quercus alba*  
*Schinus terebinthifolius*  
*Diospyros* spp.  
*Prunus* spp.  
*Toxicodendron radicans*  
*Toxicodendron* spp.  
*Toxicodendron vernix*  
*Prunus* spp.  
*Rubus* spp.  
*Cercis canadensis*  
*Hosia multiflora*  
*Flaegagnus angustifolia*  
*Salvia* spp.  
*Artemisia californica*  
*Rubus spectabilis*  
*Tamarix ramosissima*  
*Baccharis halimifolia*  
*Sassafras albidum*  
*Oxydendrum arboreum*  
*Rhus glabra*  
*Rhus copallinum*  
*Liquidambar styraciflua*  
*Polystichum munitum*  
*Triadica scabifera*  
*Lithocarpus densiflorus*  
*Rubus parviflorus*  
*Nicotiana glauca*  
*Campsis radicans*  
*Parthenocissus quinquefolia*  
*Myrica cerifera*  
*Salix* spp.  
*Liriodendron tulipifera*  
*Eriodictyon californicum*

## Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. TO THE EXTENT PERMITTED BY LAW, Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

## Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. To the extent permitted by law, all such risks shall be assumed by buyer.

## Limitation of Remedies

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

- (1) Refund of purchase price paid by buyer or user for product bought, or
- (2) Replacement of amount of product used.

To the extent permitted by law, Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or Limitation of Remedies in any manner.

\*Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268

Label Code: D02-148-007  
Replaces Label: D02-148-006  
LOES Number: 010-014/1

EPA accepted 08/20/15

## Revisions:

1. Updated trademark
2. Glypho Tank Mix: Revised last sentence before NOTE to read, "The screen size in the nozzle or line strainers must be no finer than 50 mesh."
3. Added section on Additional Limitations for Aerial Application in Fresno County, California Only.
4. Add salvinia under Perennial Weeds
5. Rolled supplemental labels for Non-Ag uses into Section 3 label

## Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, to the extent permitted by law, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitations of Remedies.



# Escort<sup>®</sup> XP

GROUP 2 HERBICIDE

## HERBICIDE

Dry Flowable		By Weight
Active ingredient		
Methoxy-methyl		
Methyl 2-[[[4-methoxy-6-methyl-1,3,5-triazin-2-ylamino]carbonyl]amino]propanoate	95%	
Other ingredients	5%	
TOTAL	100%	
EPA Reg. No. 492-1549	EPA Est. No. 862-IL-001	

Reusable Container

### KEEP OUT OF REACH OF CHILDREN CAUTION

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.)

Net Weight  
**1 Pound**  
84122394  
A01780754 150622AV2

See inside label for complete First Aid Instructions, Precautionary Statements, Directions for Use and Storage and Disposal Instructions.

#### AGRICULTURAL USES

##### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with plants, soil, or water is:

- Coveralls
- Shoes plus socks

#### FIRST AID

**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 further instructions.

**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 further treatment advice. Flush the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-338-7377 for emergency medical treatment information.

#### PRECAUTIONARY STATEMENTS

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**  
**CAUTION:** Causes eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust or spray mist.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**  
Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.

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

**USER SAFETY RECOMMENDATIONS**  
**USERS SHOULD:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

#### ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate. This herbicide is toxic to plants of extremely low concentrations. Nontarget plants may be adversely affected from drift and run-off.

Produced for:  
Bayer Environmental Science  
A Division of Bayer CropScience LP  
211 W. Alexander Drive  
Research Triangle Park, NC 27709

Bayer

OPEN HERE

GROUP 2 HERBICIDE



# Escort XP

## HERBICIDE

### Dry Flowable

Active Ingredient	By Weight
Metsulfuron methyl	
Methyl 2-[[[4-(methoxy-6-methyl-1,3,5-triazin-2-ylamino)-carbonyl]amino]sulfonyl]benzoate	60%
Other Ingredients	40%
<b>TOTAL</b>	<b>100%</b>

EPA Reg. No. 432-1549  
EPA Est. No. 352-IL-001

Nonrefillable Container

## KEEP OUT OF REACH OF CHILDREN CAUTION

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.)

See inside leaflet for complete First Aid Instructions, Precautionary Statements, Directions for Use and Storage and Disposal Instructions.

Net Weight  
**1 Pound**  
**84122394**  
A01780754 150622AV3

## AGRICULTURAL USES

### 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 4 hours. PPE required for 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
- Shoes plus socks

## FIRST AID

**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 further 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 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 contact 1-800-334-7577 for emergency medical treatment information.

## PRECAUTIONARY STATEMENTS

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**  
**CAUTION!** Causes eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust or spray mist.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**  
Applicators and other handlers must wear:  
Long-sleeved shirt and long pants.

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

## USER SAFETY RECOMMENDATIONS

**USERS SHOULD:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

## ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate. This herbicide is injurious to plants at extremely low concentrations. Nontarget plants may be adversely affected from drift and run-off.

Produced for:  
Bayer Environmental Science  
A Division of Bayer CropScience LP  
2 T. W. Alexander Drive  
Research Triangle Park, NC 27709

Bayer

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Escort® XP Herbicide must be used only in accordance with instructions on this label or in separately published Bayer CropScience LP instructions.

Bayer CropScience LP will not be responsible for losses or damages resulting from the use of this product in any manner not specified on this label. User assumes all risks associated with such non-specified use.

Do not apply more than 4 ounces of Escort® XP Herbicide per acre per year.

Do not use on food or feed crops except as specified by this label or supplemental 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 in your State responsible for pesticide regulation.

## PRODUCT INFORMATION

Escort® XP Herbicide is a dispersible granule that is mixed in water and applied as a spray by ground or aerial application.

Escort® XP Herbicide is registered for the control of annual and perennial weeds and unwanted woody plants on private, public and military lands, on rights-of-way, industrial sites, non-crop areas, ditchbanks of dry drainage ditches, certain types of unimproved turf grass, and conifer and hardwood plantations, including grazed areas on these sites. Do not use on irrigation ditches.

Escort® XP Herbicide controls weeds and woody plants primarily by post-emergent activity. Although Escort® XP Herbicide has pre-emergence activity, best results are generally obtained when Escort® XP Herbicide is applied to foliage after emergence or dormancy break. Generally, for the control of annual weeds, Escort® XP Herbicide provides the best results when applied to young, actively growing weeds. For the control of perennial weeds, applications made at the bud/bloom stage or while the target weeds are in the fall rosette stage may provide the best results. The use rate depends upon the weed species and size at the time of application.

The degree and duration of control may depend on the following:

- weed spectrum and infestation intensity
- weed size at application
- environmental conditions at and following treatment
- soil pH, soil moisture, and soil organic matter

Escort® XP Herbicide may be applied on conifer and hardwood plantations, and non-crop sites that contain areas of temporary surface water caused by the collection of water between planting beds, in equipment ruts, or in other depressions created by management activities. It is permissible to treat intermittently flooded low lying sites, seasonally dry flood plains and transitional areas between upland and lowland sites when no water is present. It is also permissible to treat marshes, swamps and bogs after water has receded as well as seasonally dry flood deltas. DO NOT make applications to natural or man-made bodies of water such as lakes, reservoirs, ponds, streams, and canals.

## BIOLOGICAL ACTIVITY

Escort® XP Herbicide is absorbed primarily through the foliage of plants, and by the roots to a lesser degree. Plant cell division is generally inhibited in sensitive plants within a few hours following uptake. Two to 4 weeks after application, leaf growth slows followed by discoloration and tissue death. The final effects on annual weeds are evident about 4 to 6 weeks after application. The ultimate effect on perennial weeds and woody plants occurs in the growing season following application.

Warm, moist conditions following treatment promote the activity of Escort® XP Herbicide, while cold, dry conditions may reduce or delay activity. Weeds and brush hardened off by cold weather or drought stress may not be controlled. Weed and brush control may be reduced if rainfall occurs soon after application.

## ADJUVANTS

The use of a surfactant is recommended to enhance the control of susceptible plants, except where noted. Apply at a minimum rate (concentration) of 1/4% volume/volume (1 quart per 100 gallons of spray solution), or at the manufacturer's recommended rate. Use only EPA approved surfactants containing at least 80% active ingredient. Certain types of surfactants, such as those incorporating acetic acid (i.e. LI-700), may not be compatible with Escort® XP Herbicide and may result in decreased performance. Certain surfactants may not be suitable for use on desirable plants, such as turf and conifers, listed on this label. Consult the surfactant manufacturer's label for appropriate uses.



## INVASIVE SPECIES MANAGEMENT

This product may be considered for use on public, private, and tribal lands to treat certain weed species infestations that have been determined to be invasive, consistent with the Federal Interagency Committee for the Management of Noxious and Exotic Weeds (FICMNEW) National Early Detection and Rapid Response (EDRR) System for invasive plants.

Effective EDRR systems address invasions by eradicating the invader where possible, and controlling them when the invasive species is too established to be feasibly eradicated. Once an EDRR assessment has been completed and action is recommended, a Rapid Response needs to be taken to quickly contain, deny reproduction, and if possible eliminate the invader. Consult your appropriate state extension service, forest service, or regional multidisciplinary invasive species management coordination team to determine the appropriate Rapid Response.

## RESISTANCE

Escort® XP Herbicide, which contains the active ingredient metsulfuron methyl, is a Group 2 herbicide based on the mode of action classification system of the Weed Science Society of America.

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action.

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant bio-types. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide recommendations available in your area.

## INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants, or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

## PREPARING FOR USE - Site Specific Considerations

Understanding the risks associated with the application of Escort® XP Herbicide is essential to aid in preventing off-site injury to desirable vegetation and agricultural crops. The risk of off-site movement, both during and after application, may be affected by a number of site specific factors such as the nature, texture and stability of the soil, the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, drainage patterns, and other local physical and environmental conditions. A careful evaluation of the potential for off-site movement from the intended application site, including movement of treated soil by wind or water erosion, must be made prior to using Escort® XP Herbicide. This evaluation is particularly critical where desirable vegetation or crops are grown on neighboring land for which the use of Escort® XP Herbicide is not labeled. If prevailing local conditions may be expected to result in off-site movement and cause damage to neighboring desirable vegetation or agricultural crops, do not apply Escort® XP Herbicide.

Before applying Escort® XP Herbicide the user must read and understand all label directions, precautions and restrictions completely, including these requirements for a site specific evaluation. If you do not understand any of the instructions or precautions on the label, or are unable to make a site specific evaluation yourself, consult your local agricultural dealer, cooperative extension service, land managers, professional consultants, or other qualified authorities familiar with the area to be treated. If you still have questions regarding the need for site specific considerations, please call 1-800-331-2867.

## TANK MIXES

Escort® XP Herbicide may be tank mixed with other herbicides registered for the use sites described in this label. Use only those tank mix partners which are labeled for the appropriate use site. When tank mixing, use the most restrictive label limitations for each of the products being used in the tank mix.

## AGRICULTURAL USES

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

- Coveralls
- Shoes plus socks

## CONIFER PLANTATIONS

### Application Information

Escort® XP Herbicide is registered for the control of many species of weeds and deciduous trees on sites where conifers are growing or are to be planted. Apply by ground equipment or by air (helicopter only). Refer to the "Weeds Controlled" and "Brush Species Controlled" for a listing of susceptible species.

### Application Timing

Apply Escort® XP Herbicide after weeds have emerged or after undesirable hardwoods have broken winter dormancy and have reached the point of full leaf expansion.

## Conifer Site Preparation

### --Application Before Transplanting

After consulting the "Weeds Controlled" and "Brush Species Controlled" tables, apply the rates of Escort® XP Herbicide specified for the most difficult to control species on the site.

**Southeast**—Apply up to 4 ounces per acre for loblolly and slash pines. Transplant the following planting season.

**Northeast and Lake States**—Apply up to 2 ounces per acre for red pine. Transplant the following planting season. Apply up to 2 ounces per acre for black, white and Norway spruce. Transplant the following spring.

**West**—Apply up to 2 ounces per acre prior to planting Douglas Fir, Sitka Spruce, Western Red Cedar, Western Hemlock, Ponderosa Pine, and Grand Fir in the Coast Rangeland and western slope of the Cascades in Oregon and Washington. These conifer species listed can be planted anytime after application. Other conifer species can be planted providing the user has prior experience indicating acceptable tolerance to Escort® XP Herbicide soil residues.

Without prior experience, it is recommended that other species be planted on a small scale to determine selectivity before large-scale plantings are made as unacceptable injury may occur. Bayer CropScience LP will not assume responsibility for injury to any conifer species not listed on this label.

### Tank Mix Combinations—

For broader spectrum control, the following products may be used in combination with Escort® XP Herbicide.

### Glyphosate (4 pound active per gallon)

Tank mix 1 to 2 ounces of Escort® XP Herbicide with 2 to 10 quarts of glyphosate per acre. Refer to the product container for a list of species controlled.

### Imazapyr (4 pound active per gallon)

Tank mix 1 to 2 ounces of Escort® XP Herbicide with 10 to 24 fluid ounces of imazapyr per acre. Loblolly and slash pines may be transplanted the planting season following application. This combination controls ash, black gum, cherry, hawthorn, honeysuckle, hophornbeam, persimmon, oaks (red, white and water), sassafras, sweetgum, Vaccinium species, and suppresses blackberry, dogwood, elms, myrtle dahoon, hickories, and red maple.



**Glyphosate (4 pound active per gallon) + Imazapyr (4 pound active per gallon)**

Tank mix 1/2 to 1 ounce of Escort® XP Herbicide with 16 to 64 fluid ounces of glyphosate and 10 to 12 fluid ounces of imazapyr per acre. Slash and loblolly pines may be transplanted the planting season following application. This combination controls cherry, dogwood, elms, oaks (red and water), persimmon, sassafras, sweetgum and suppresses hickory.

**Velpar® L [VU] Herbicide or Velpar® DF [VU] Herbicide**

Tank mix 1 to 2 ounces of Escort® XP Herbicide per acre with Velpar® L [VU] Herbicide or Velpar® DF [VU] Herbicide at the rates specified on the container for various soil textures. Loblolly and slash pines may be transplanted the planting season following application. Refer to the product container for a list of species controlled.

**Oust® Extra Herbicide**

Tank mix 1/2 to 1 1/2 ounces of Escort® XP Herbicide with 2 to 3 ounces of Oust® Extra Herbicide per acre for herbaceous weed control. Refer to the product container and the "Weeds Controlled" section of this label for a listing of the weeds controlled. Loblolly and slash pines may be transplanted the planting season following application. Tank mix 2 ounces of Escort® XP Herbicide with 3 ounces of Oust® Extra Herbicide per acre for herbaceous weed control and early spring suppression of bull thistle and Canada thistle in the Coast Rangeland and western slope of the Cascade Mountains. Douglas fir may be transplanted at least 90 days following application.

**Release--Hardwood Control and Suppression**

Escort® XP Herbicide may be used for application over the top of established slash and loblolly pine to control the species listed in "Weeds Controlled" and "Brush Species Controlled" section of this label. Apply 1 to 4 ounces per acre to control the species indicated, including kudzu.

**Tank Mix Combinations—**

For broader spectrum control the following products may be used in combination with Escort® XP Herbicide.

**Imazapyr (4 pound active per gallon)**

Tank mix 1 to 2 ounces of Escort® XP Herbicide with 8 to 16 fluid ounces of imazapyr per acre for application to loblolly pine. Refer to the imazapyr label regarding the use of surfactants and the appropriate application timing with respect to the age and development stage of the pines. This combination controls ash, black gum, cherry, hawthorn, honeysuckle, hophorn-

beam, oaks (red, white and water), sassafras, sweetgum, Vaccinium species, and suppresses blackberry, dogwood, elms, myrtle dahoon, hickories, persimmon, and red maple.

**Velpar® L [VU] Herbicide or Velpar® DF [VU] Herbicide**

Tank mix 1 to 2 ounces of Escort® XP Herbicide with Velpar® L [VU] Herbicide or Velpar® DF [VU] Herbicide at the rates specified on the container for various soil textures. This combination may be applied to loblolly and slash pines.

**Release--Herbaceous Weed Control**

Escort® XP Herbicide may be applied to transplanted loblolly and slash pine for the control of herbaceous competition. Consult the "Weeds Controlled" for a listing of the susceptible species and application rates. Best results are obtained when Escort® XP Herbicide is applied just before weed emergence until shortly after weed emergence.

**Tank Mix Combinations—**

For broader spectrum control the following products may be used in combination with Escort® XP Herbicide.

**Imazapyr (4 pound active per gallon)**

Tank mix 1/2 to 1 ounce of Escort® XP Herbicide with 4 fluid ounces of imazapyr per acre. The tank mix may be used on loblolly pine.

**Velpar® L [VU] Herbicide or Velpar® DF [VU] Herbicide**

Tank mix 1/2 to 1 ounce of Escort® XP Herbicide with Velpar® L [VU] Herbicide or Velpar® DF [VU] Herbicide at the rates specified on the container for various soil textures. This combination may be applied to loblolly and slash pines.

**Release - Directed Spray in Conifers**

**Western US**

To release conifers from competing brush species, such as, blackberry, salmonberry, snowberry, thimbleberry and wild roses, mix 2 to 4 ounces of Escort® XP Herbicide per 100 gallons of spray solution. Direct spray onto the foliage of competing brush species using a knapsack or backpack sprayer. For best results, apply any time after the brush species have reached full leaf stage but before autumn coloration. For best results at application, the majority of the brush must be less than six feet in height to help ensure adequate spray coverage. Thorough coverage of the target foliage is necessary to optimize results. Care must be taken to direct the Escort® XP Herbicide spray solution away from the conifer foliage.

**NOTE:**

Escort® XP Herbicide may cause temporary yellowing and or growth suppression when the spray solution contacts conifer foliage. The use of a surfactant with Escort® XP Herbicide may improve brush control results. When using a surfactant with Escort® XP Herbicide, extra precaution must be taken to avoid contact with conifer foliage. Excessive drift onto conifers may result in severe injury.

### **IMPORTANT PRECAUTIONS—CONIFER PLANTATIONS ONLY**

- Applications of Escort® XP Herbicide made to conifers that are suffering from loss of vigor caused by insects, diseases, drought, winter damage, animal damage, excessive soil moisture, planting shock, or other stresses may injure or kill the trees.
- Applications of Escort® XP Herbicide made for herbaceous release must only be made after adequate rainfall has closed the planting slit and settled the soil around the roots following transplanting.
- Do not apply Escort® XP Herbicide to conifers grown as ornamentals.
- Escort® XP Herbicide applications may result in damage and mortality to other species of conifers when they are present on sites with those listed in the preceding specifications for conifer plantations.

### **HARDWOOD PLANTATIONS**

**Application Information**

Escort® XP Herbicide may be used at rates of up to 2 ounces per acre for the control of many weed species on sites where yellow poplar is growing or is to be planted, and on sites where red alder is to be planted. Apply by ground equipment or by air (helicopter only). Refer to the "Weeds Controlled" sections of this label for a listing of susceptible species.

**Application Timing**

Escort® XP Herbicide may be applied as a site preparation treatment prior to planting red alder or yellow poplar. As a prior to planting site preparation treatment for red alder, Escort® XP Herbicide may be tank mixed with other herbicides labeled for this use.

Escort® XP Herbicide may also be applied over-the-top of planted yellow poplar seedlings after the soil has settled around the root system, but before the seedlings have broken dormancy (prior to bud break).

### **Release--Herbaceous Weed Control**

Escort® XP Herbicide may be applied to yellow poplar for the control of herbaceous competition. Consult the "Weeds Controlled" for a listing of the susceptible species and specified application rates. Best results are obtained when Escort® XP Herbicide is applied just before weed emergence until shortly after weed emergence.

**Tank Mix Combinations—**

Tank mix 1/2 ounce of Escort® XP Herbicide with 4 to 6 pints of Velpar® L [VU] Herbicide as directed on the package label for "RELEASE--HERBACEOUS WEED CONTROL!" in pine plantations in the eastern U.S. Follow the Velpar® L [VU] Herbicide label directions regarding altering the application rate by soil texture.

### **IMPORTANT PRECAUTIONS—HARDWOOD PLANTATIONS ONLY**

- Application of Velpar® L [VU] Herbicide and Escort® XP Herbicide made to yellow poplar that are suffering from loss of vigor caused by insects, disease, drought, winter damage, animal damage, excessive soil moisture, planting shock, or other stresses may injure or kill the seedlings.
- Applications of Escort® XP Herbicide made for release must only be made after adequate rainfall has closed the planting slit and settled the soil around the roots following transplanting.
- The use of surfactant is not recommended for applications made over the tops of trees.
- Careful consideration must be given by an experienced and knowledgeable forester to match the requirements of yellow poplar and/or red alder to the conditions of the site. Treatment of yellow poplar and/or red alder planted on a site inadequate to meet its requirements may injure or kill the seedlings.

### **PASTURE, RANGELAND, AND CONSERVATION RESERVE PROGRAM (CRP)**

Escort® XP Herbicide is registered for the control of broadleaf weeds, brush and several woody vine species in the establishment, maintenance, and restoration of pasture, rangeland, and Conservation Reserve Program (CRP).



Escort® XP Herbicide may be tank mixed with other pesticides labeled for use in pasture, rangeland, and CRP. Read and follow the labels on all products used in the tank mix. Observe the most restrictive precautions on each of the product's labels. Application of Escort® XP Herbicide to pasture, rangeland and CRP may be made by ground or air. Use a sufficient volume of water to ensure thorough coverage of the targeted weeds with the equipment being used. In Idaho, Oregon and Washington use a minimum application volume of 3 gallons of spray solution per acre.

### **APPLICATION INFORMATION FOR GRASS ESTABLISHMENT IN PASTURE, RANGELAND, AND CONSERVATION RESERVE PROGRAM (CRP)**

Escort® XP Herbicide is registered for the control or suppression of broadleaf weeds to aid in the establishment of the following perennial native or improved grasses planted in pasture, rangeland, and acres enrolled in the Conservation Reserve Program (CRP):

Blue Gramma	Sideoats gramma
Bluestems-	Switchgrass-
Big	Blackwell
Little	Wheatgrasses-
Plains	bluebunch
Sand	crested
WW Spar	intermediate
Buffalograss	pubescent
Green sprangletop	Siberian
Kleingrass	slender
Lovegrasses-	steambank
Atherstone	tall
Sand	thickspike
Weeping	western
Wilman	Wildrye grass-
Orchardgrass	Russian

Maximize potential for grass establishment by consulting with the Natural Resource and Conservation Service of other government agencies or local experts concerning planting techniques and other cultural practices.

Performance from Escort® XP Herbicide may not always be satisfactory due to the inability of newly planted grass stands to sufficiently compete with weeds and the severity of weed pressure in new grass stands.

An additional herbicide application or mowing may be needed.

### **Use Rates and Application Timing for Grass Establishment in Pasture, Rangeland and CRP**

#### **Preplant (prior to planting) or Preemergence (after planting but before grass emergence)**

Do not use more than 1/10 ounce/acre of Escort® XP Herbicide for grass establishment in pasture, rangeland, and CRP. Apply Escort® XP Herbicide at 1/10 ounce/acre on all labeled grasses except orchardgrass and Russian wildrye grass. Do not apply Escort® XP Herbicide preplant or preemergence to orchardgrass and Russian wildrye grass as severe crop injury may result.

#### **Early postemergence to new plantings**

Apply Escort® XP Herbicide at 1/10 ounce/acre, plus a non-ionic surfactant at the rate of 2 to 4 pints/100 gallons of spray solution on all labeled grasses anytime after grass emergence.

Do not use a spray adjuvant other than non-ionic surfactant. Because grass species differ in time of emergence, apply only after the majority of grasses are in the 3 to 4 leaf stage.

#### **Postemergence to stands with 1 – 5 leaf grasses planted the previous season.**

Apply Escort® XP Herbicide at 1/10 ounce/acre plus a non-ionic surfactant at the rate of 2 to 4 pints/100 gallons of spray solution on all labeled grasses when the majority of the grasses have one or more leaves.

Do not use a spray adjuvant other than non-ionic surfactant.

### **APPLICATION INFORMATION FOR ESTABLISHED GRASSES IN PASTURE, RANGELAND, AND CONSERVATION RESERVE PROGRAM (CRP)**

#### **Use Rates for Established Grasses in Pasture, Rangeland, and CRP**

Apply up to 1 2/3 ounces Escort® XP Herbicide per acre as a broadcast application to established grasses in pasture, rangeland and CRP. For spot applications, use 1 ounce per 100 gallons of water. Do not apply more than 1 2/3 ounces of Escort® XP Herbicide per acre per year in pasture, rangeland, and CRP.

Refer to the Weeds Controlled section of the section 3 label for a listing of the weeds controlled by Escort® XP Herbicide and the appropriate use rate to obtain control.

### Application Timing – Established Grasses in Pasture, Rangeland, and CRP

Escort® XP Herbicide may be applied to established native grasses such as bluestems and grama, and on other established grasses such as bermudagrass, bluegrass, orchardgrass, bromegrass, fescue and timothy that were planted the previous growing season (or earlier) and are fully tillered, unless otherwise directed on this label. Specific application timing information on several of these grass species follows:

Grass	Minimum time from Grass establishment Escort® XP Herbicide application
Bermudagrass	2 months
Bluegrass, bromegrass, Orchardgrass	6 months
Timothy	12 months
Fescue	24 months

### Rotation Intervals in Pasture, Rangeland, and CRP for Overseeding and Renovation

Location	Crop or Grass Species	Maximum Escort® XP Herbicide Rate on Pasture, Rangeland, and CRP (oz per A)	Minimum Rotation Interval (months)
AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, WV	Alfalfa, red clover, white clover, sweet clover, bermudagrass, bluegrass, ryegrass, tall fescue	1/10 to 3/10	4
	Wheat (except durum)	1/10 to 3/10	1
	Durum, barley, oat	1/10 to 3/10	10

(continued)

### Rotation Intervals in Pasture, Rangeland, and CRP for Overseeding and Renovation (continued)

Location	Crop or Grass Species	Maximum Escort® XP Herbicide Rate on Pasture, Rangeland, and CRP (oz per A)	Minimum Rotation Interval (months)
ALL STATES NOT INCLUDED ABOVE	Red clover, white clover, and sweet clover	1/10 to 2/10	12
	Bermudagrass, bluegrass, ryegrass	1/10 to 2/10	6
	Tall Fescue	1/10 to 2/10	18
	Wheat (except durum)	1/10 to 2/10	1
	Durum, barley, oat	1/10 to 2/10	10
ALL AREAS WITH SOIL PH OF 7.5 OR LESS	Russian wildrye	1/10 to 1/2	1
	Green needlegrass, switchgrass, sheep fescue	1/10 to 1	1
	Meadow brome, smooth brome, alta fescue, red fescue, meadow foxtail, orchardgrass, Russian wildrye, timothy	1/10 to 1	2
ALL AREAS WITH SOIL PH OF 7.9 OR LESS	Alkali sacaton, mountain brome, blue grama, thickspike wheatgrass	1/10 to 1	1
	Sidecoats grama, switchgrass	1/10 to 1/2	2
	Western wheatgrass	1/10 to 1	2
	Sidecoats grama, switchgrass, big bluestem	1/10 to 1	3

**Fescue Precautions:**

Note that Escort® XP Herbicide may temporarily stunt tall fescue, cause it to turn yellow, or cause seedhead suppression. To minimize these symptoms, take the following precautions:

- Do not use more than 4/10 ounce/acre of Escort® XP Herbicide.
- Tank mix Escort® XP Herbicide with 2,4-D.
- Use the lowest specified rate for target weeds.
- Use a non-ionic surfactant at 1/2 to 1 pint per 100 gallons of spray solution.
- Make application later in the spring after the new growth is 5 to 6 inches tall, or in the fall.
- Do not use surfactant when liquid nitrogen is used as a carrier.
- Do not use a spray adjuvant other than non-ionic surfactant.

The first cutting yields may be reduced due to seedhead suppression resulting from treatment with Escort® XP Herbicide.

**Timothy Precautions:**

Timothy should be at least 6 inches tall at application and be actively growing. Applications of Escort® XP Herbicide to timothy under any other conditions may cause crop yellowing and/or stunting. To minimize these symptoms, take the following precautions:

- Do not use more than 4/10 ounce/acre Escort® XP Herbicide.
- Tank mix Escort® XP Herbicide with 2, 4-D.
- Use the lowest specified rate for target weeds.
- Use a non-ionic surfactant at 1/2 pint per 100 gallons of spray solution (1/16%).
- Make applications in the late summer or fall.
- Do not use surfactant when liquid nitrogen is used as a carrier.
- Do not use spray adjuvant other than non-ionic surfactant.

Application of Escort® XP Herbicide to Pensacola bahiagrass, ryegrass (Italian or perennial) and Garrison's creeping foxtail may cause severe injury to and/or loss of forage.

**Other Pasture and Rangeland Grasses**

Varieties and species of forage grasses differ in their tolerance to herbicides. When using Escort® XP Herbicide on a particular grass for the first time, limit use to a small area. If no injury occurs throughout the season, larger acreage may be treated the following season.

Broadleaf forage species, such as alfalfa and clover, are highly sensitive to Escort® XP Herbicide and will be severely stunted or injured by Escort® XP Herbicide.

**SPOT TREATMENTS**

Escort® XP Herbicide may be used for use as spot treatment to control noxious and troublesome weeds on pasture, rangeland and CRP.

**Application Information**

Escort® XP Herbicide may be used to control many species of weeds, including noxious weeds, in forage grasses growing on pasture, rangeland, and CRP. Refer to the "Weeds Controlled" section of the package label or supplemental labeling for a listing of susceptible weed species. If the sprayer is calibrated, consult the package label or other supplemental labeling to select the application rate per acre of Escort® XP Herbicide appropriate for the target weeds. Or mix one gram of Escort® XP Herbicide per one gallon of water along with a suitable surfactant. Spray to the point of wetting the entire surface of the target weeds, approximately 40 gallons of solution per acre. When applied in this manner there is no grazing restrictions following the use of Escort® XP Herbicide. Applications may be made at anytime of the year, except when the soil is frozen.

**CROP ROTATION**

Before using Escort® XP Herbicide, carefully consider your crop rotation plans and options. For rotational flexibility, do not treat all of your pasture, rangeland or CRP acres at the same time.

**Minimum Rotational Intervals**

Minimum rotation intervals\* are determined by the rate of breakdown of Escort® XP Herbicide applied. Escort® XP Herbicide breakdown in the soil is affected by soil pH, presence of soil microorganisms, soil temperature, and soil moisture. Low soil pH, high soil temperature, and high soil moisture increase Escort® XP Herbicide breakdown in soil, while high soil pH, low soil temperature, and low soil moisture slow Escort® XP Herbicide breakdown.

Of these 3 factors, only soil pH remains relatively constant. Soil temperature, and to a greater extent, soil moisture, can vary significantly from year to year and from area to area. For this reason, soil temperatures and soil moisture should be monitored regularly when considering crop rotations.

\* The minimum rotation interval represents the period of time from the last application to the anticipated date of the next planting.



#### **Soil pH Limitations**

Escort® XP Herbicide should not be used on soils having a pH above 7.9, as extended soil residual activity could extend crop rotation intervals beyond normal. Under certain conditions, Escort® XP Herbicide could remain in the soil for 34 months or more, injuring wheat and barley. In addition, other crops planted in high-pH soils can be extremely sensitive to low concentrations of Escort® XP Herbicide.

#### **Checking Soil pH**

Before using Escort® XP Herbicide, determine the soil pH of the areas of intended use. To obtain a representative pH value for the test area, take several 0' to 4" samples from different areas of the field and analyze them separately. Consult local extension publications for additional information on recommended soil sampling procedures.

#### **BIOASSAY**

A field bioassay must be completed before rotating to any crop or grass species/variety not listed in the Rotation Intervals Table, or if the soil pH is not in the specified range, or if the use rate applied is not specified in the table.

To conduct a field bioassay, grow test strips of the crop(s) or grass(es) you plan to grow the following year in fields previously treated with Escort® XP Herbicide. Crop or grass response to the bioassay will indicate whether or not to rotate to the crop(s) or grass(es) grown in the test strips.

If a field bioassay is planned, check with your local Agricultural dealer or Bayer CropScience LP representative for information detailing the field bioassay procedure.

#### **GRAZING/HAYING**

When used as directed, there is no grazing or haying restriction for use rates of 1 2/3 ounces per acre and less. Coveralls, shoes plus socks must be worn if cutting within 4 hours of treatment.

#### **IMPORTANT PRECAUTIONS**

- Do not apply more than 1 2/3 ounces of Escort® XP Herbicide per acre per year on pasture, rangeland or CRP.
- Grass species or varieties may differ in their response to various herbicides. Bayer CropScience LP recommends that you first consult your state experiment station, university, or extension agent as to sensitivity to any herbicide. If no information is available, limit the initial use of Escort® XP Herbicide to a small area. Components in a grass seed mixture will vary in tolerance to Escort® XP Herbicide so the final stand may not reflect the seed ratio.
- Under certain conditions such as heavy rainfall, high pH, prolonged cold weather, or wide fluctuations in day/night temperatures prior to or soon after Escort® XP Herbicide application, temporary discoloration and/or grass injury may occur. Escort® XP Herbicide should not be applied to grass that is stressed by severe weather conditions, drought, low fertility, water-saturated soils, disease, or insect damage as grass injury may result. Severe winter stress, drought, disease, or insect damage before or following application also may result in grass injury.
- Applications of Escort® XP Herbicide to pasture, rangeland, and CRP undersown with legumes may cause injury to the legumes. Legumes in a seeding mixture may be severely injured or killed following an application of Escort® XP Herbicide.
- Applications made to some established grasses may cause temporary stunting, yellowing or seedhead suppression (i.e. fescue, timothy).
- Applications made to newly established grasses less than 2 years from seeding may result in injury or loss.
- Do not apply to forage grasses known to be sensitive to Escort® XP Herbicide such as ryegrass (Italian and perennial), bahia or Garrison's creeping foxtail.
- Broadleaf forage species, such as alfalfa and clover, are highly sensitive to Escort® XP Herbicide and will be severely injured or killed.
- The control of weeds in wheel track areas may be reduced if ground applications are made when dry, dusty field conditions exist. The addition of 2,4-D or MCPA should improve weed control under these conditions.



## NON-AGRICULTURAL USES

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow others to enter the treated area until sprays have dried.

Non-crop industrial weed control and selective weed control in turf (Industrial, unimproved only) are not within the scope of the Worker Protection Standard.

## NON-CROP SITES

### Application Information

Escort® XP Herbicide is registered for weed control on private, public and military lands as follows: Uncultivated nonagricultural areas (including airports, highway, railroad and utility rights-of-way, sewage disposal areas); uncultivated agricultural areas - non-crop producing (including farmyards, fuel storage areas, fence rows, soil bank land, and barrier strips); industrial sites - outdoor (including lumberyards, pipeline and tank farms) including grazed areas on these sites. It may also be used for the control of certain noxious and troublesome weeds.

Consult the "Weeds Controlled" and "Brush Species Controlled" tables to determine the appropriate application rate.

Escort® XP Herbicide may be applied in tank mixture with other herbicides labeled for use on non-crop sites. Fully read the labels and follow all directions and restrictions on each label.

Applications may be made by ground or air. Use a sufficient volume of water to ensure thorough coverage of the target vegetation with the application equipment being used.

## NATIVE GRASSES

Escort® XP Herbicide is registered for weed control and suppression in the establishment and maintenance of native grasses. It may be used where blue grama, bluestems (big, little, plains, sand, ww spar) bromegrasses (meadow), buffalograss, green sprangletop, indiagrass, kleingrass, love-grasses (atherstone, sand, weeping, wilman), orchardgrass, sideoats

grama, switchgrass (blackwell), wheatgrass (bluebunch, intermediate, pubescent, Siberian, slender, streamband, tall, thickspike, western), and Russian wildrye are established. It may also be applied over these species in the seedling stage, except for orchardgrass and Russian wildrye.

When used as directed, there are no grazing or haying restrictions for use rates of 1 2/3 ounce per acre or less. At use rates greater than 1 2/3 ounce per acre and up to 3 1/3 ounce per acre, forage grasses may be cut for hay, fodder or green forage and fed to livestock, including lactating animals, 3 days after treatment.

### Rotation Intervals for Overseeding and Renovation

Location	Crop or Grass Species	Maximum Escort® XP Herbicide Rate (oz per A)	Minimum Rotation Interval (months)
AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, WV	Alfalfa, red clover, white clover, sweet clover, bermudagrass, bluegrass, ryegrass, tall fescue	1/10 to 3/10	4
	Wheat (except durum)	1/10 to 3/10	1
	Durum, barley, oat	1/10 to 3/10	10
ALL STATES NOT INCLUDED ABOVE	Red clover, white clover, and sweet clover	1/10 to 2/10	12
	Bermudagrass, bluegrass, ryegrass	1/10 to 2/10	6
	Tall Fescue	1/10 to 2/10	18
	Wheat (except durum)	1/10 to 2/10	1
	Durum, barley, oat	1/10 to 2/10	10
ALL AREAS WITH SOIL PH OF 7.5 OR LESS	Russian wildrye	1/10 to 1/2	1
	Green needlegrass, switchgrass, sheep fescue	1/10 to 1	1
	Meadow brome, smooth brome, alta fescue, red fescue, meadow foxtail, orchardgrass, Russian wildrye, timothy	1/10 to 1	2

(continued)

**Rotation Intervals for Overseeding and Renovation (continued)**

Location	Crop or Grass Species	Maximum Escort® XP Herbicide Rate (oz per A)	Minimum Rotation Interval (months)
ALL AREAS WITH SOIL PH OF 7.9 OR LESS	Alkali sacaton, mountain brome, blue grama, thickspike wheatgrass	1/10 to 1	1
	Sideoats grama, switchgrass	1/10 to 1/2	2
	Western wheatgrass	1/10 to 1	2
	Sideoats grama, switchgrass, big bluestem	1/10 to 1	3

**Application Information**

Apply Escort® XP Herbicide at the rate of 1/10 ounce per acre for the control and suppression\* of bur buttercup (testiculate), common purslane, common sunflower\*, cutleaf eveningprimrose\*, flaxweed\*, lambsquarters\* (common and slimleaf), marestail\*, pigweed (redroot and tumble), snow speedwell, tansymustard\* and tumble mustard (Jim Hill mustard).

\* Suppression is a visual reduction in weed competition (reduced population or vigor) as compared to untreated areas. Degree of suppression will vary with the size of weed and environmental conditions following treatment.

**Application Timing**

For established grasses, apply when weeds are in the seedling stage. For grasses in the seedling stage, apply preplant or preemergence where the soil (seed bed) has been cultivated.

**IMPORTANT PRECAUTIONS—NATIVE GRASSES**

- Grass species or varieties may differ in their response to various herbicides. If no information is available, limit the initial use of Escort® XP Herbicide to a small area. Components in a grass seed mixture will vary in tolerance to Escort® XP Herbicide, so the final stand may not reflect the seed ratio.
- Under certain conditions such as heavy rainfall, high pH, prolonged cold weather, or wide fluctuations in day/night temperatures prior to or soon after Escort® XP Herbicide application, temporary discoloration and/or grass injury may occur. Injury may result when Escort® XP Herbicide is

applied to grass that is stressed by severe weather conditions, drought, low fertility, water-saturated soils, disease, or insect damage. Severe winter stress, drought, disease, or insect damage before or following application also may result in grass injury.

**GRASS REPLANT INTERVALS**

Following an application of Escort® XP Herbicide to non-crop areas, the treated sites may be replanted with various species of grasses at the intervals listed below.

For soils with a pH of 7.5 or less, observe the following replant intervals:

Species	Rate (ounces per acre)	Replant Interval (months)
Bromo, Meadow	1/2—1	2
	1—2	3
Bromo, Smooth	1/2—1	2
	1—2	4
Fescue, Alta	1/2—1	2
	1—2	4
Fescue, Red	1/2—1	2
	1—2	4
Fescue, Sheep	1/2—1	1
	1—2	4
Foxtail, Meadow	1/2—1	2
	1—2	4
Green Needlegrass	1/2—2	1
Orchardgrass	1/2—1	2
	1—2	4
Russian wildrye	1/2—1	1
	1	2
	2	3
Switchgrass	1/2—1	1
	1—2	3
Timothy	1/2—1	2
	1—2	4
Wheatgrass, Western	1/2—1	2
	1—2	3

For soils with a pH of 7.5 or greater observe the following replant intervals:

Species	Rate (ounces per acre)	Replant Interval (months)
Alkali Sacaton	1/2—1	1
	1—2	3
Bluestem, Big	1/2—2	3
Brome, Mountain	1/2—1	1
	1—2	2
Grama, Blue	1/2—2	1
Grama, Sideoats	1/2	2
	>1/2	>3
Switchgrass	1/2	2
	>1/2	>3
Wheatgrass, Thickspike	1/2—2	1
Wheatgrass, Western	1—2	2
	1/2—1	3

The specified intervals are for applications made in the Spring to early Summer. Because Escort® XP Herbicide degradation is slowed by cold or frozen soils, applications made in the late Summer or Fall should consider the intervals as beginning in the Spring following treatment.

Testing has indicated that there is considerable variation in response among the species of grasses when seeded into areas treated with Escort® XP Herbicide. If species other than those listed above are to be planted into areas treated with Escort® XP Herbicide, a field bioassay must be performed, or previous experience may be used, to determine the feasibility of replanting treated sites.

#### ADDITIONAL GRASS INFORMATION

##### APPLICATION INFORMATION FOR GRASS ESTABLISHMENT

Escort® XP Herbicide may be used for the control or suppression of broadleaf weeds to aid in the establishment of the following perennial native or improved grasses:

Blue grama	Sideoats grama
Bluestems –	Switchgrass –
big	blackwell
little	Wheatgrasses –
plains	bluebunch
sand	crested
WW spar	intermediate
Buffalograss	pubescent
Green sprangletop	Siberian
Kleingrass	slender
Lovegrassess –	steambank
atherstone	tall
sand	thickspike
weeping	Western
wilman	Wildrye grass –
Orchardgrass	Russian

Maximize potential for grass establishment by consulting with the Natural Resource and Conservation Service of other government agencies or local experts concerning planting techniques and other cultural practices.

Performance from Escort® XP Herbicide may not always be satisfactory due to the inability of newly planted grass stands to sufficiently compete with weeds and the severity of weed pressure in new grass stands.

An additional herbicide application or mowing may be needed.

**Use Rates and Application Timing for Grass Establishment Preplant (prior to planting) or Preemergence (after planting but before grass emergence)**

Do not use more than 1/10 ounce per acre of Escort® XP Herbicide for grass establishment.

Apply Escort® XP Herbicide at 1/10 ounce per acre on all labeled grasses except orchardgrass and Russian wildrye grass. Do not apply Escort® XP Herbicide preplant or preemergence to orchardgrass and Russian wildrye grass as severe crop injury may result.



#### Early postemergence to new plantings

Apply Escort® XP Herbicide at 1/10 ounce per acre, plus a non-ionic surfactant at the rate of 2 to 4 pints per 100 gallons of spray solution on all labeled grasses anytime after grass emergence.

Do not use a spray adjuvant other than non-ionic surfactant.

Because grass species differ in time of emergence, apply only after the majority of grasses are in the 3 to 4 leaf stage.

#### Postemergence to stands with 1 – 5 leaf grasses planted the previous season

Apply Escort® XP Herbicide at 1/10 ounce per acre plus a non-ionic surfactant at the rate of 2 to 4 pints per 100 gallons of spray solution, on all labeled grasses when the majority of the grasses have one or more leaves.

Do not use a spray adjuvant other than non-ionic surfactant.

#### APPLICATION INFORMATION FOR ESTABLISHED GRASSES

##### Use Rates for Established Grasses

Apply up to 1 ounce Escort® XP Herbicide per acre as a broadcast application to established grasses. For spot applications, use 1 ounce per 100 gallons of water. Do not apply more than 1 2/3 ounces of Escort® XP Herbicide per acre per year.

Refer to the Weeds Controlled section of this label for a listing of the weeds controlled by Escort® XP Herbicide and the appropriate use rate to obtain control.

##### Application Timing – Established Grasses

Escort® XP Herbicide may be applied to established native grasses such as bluestems and grama, and on other established grasses such as bermudagrass, bluegrass, orchardgrass, bromegrass, fescue and timothy that were planted the previous growing season (or earlier) and are fully tillered, unless otherwise directed on this label. Specific application timing information on several of these grass species follows:

Grass	Minimum time from Grass establishment Escort® XP Herbicide application
Bermudagrass	2 months
Bluegrass, bromegrass, Orchardgrass	6 months
Timothy	12 months
Fescue	24 months

#### Fescue and Timothy Precautions

When used on fescue and timothy grasses, Escort® XP Herbicide may cause reduced first cutting yields due to temporary stunting, leaf yellowing, or seed head suppression. To help minimize these symptoms, follow the information below:

- Use the lowest labeled rate for the target weeds.
- Tank mix 2,4-D with Escort® XP Herbicide applications.
- Apply Escort® XP Herbicide at no more than 4/10 ounce per acre.
- Make applications when the grasses are 5 to 6 inches tall in late summer or fall.
- Use only a non-ionic surfactant at 1/2 pint per 100 gallons of spray solution.
- When liquid nitrogen is the spray carrier, do not include the surfactant.

#### Other Grasses:

Application of Escort® XP Herbicide to Pensacola bahiagrass, ryegrass (Italian or perennial) and Garrison's creeping foxtail may cause severe injury to and/or loss of forage.

Varieties and species of forage grasses differ in their tolerance to herbicides. When using Escort® XP Herbicide on a particular grass for the first time, limit use to a small area. If no injury occurs throughout the season, larger acreage may be treated the following season.

Broadleaf forage species, such as alfalfa and clover, are highly sensitive to Escort® XP Herbicide and will be severely stunted or injured by Escort® XP Herbicide.

#### CROP ROTATION

Before using Escort® XP Herbicide, carefully consider your crop rotation plans and options.

##### Minimum Rotational Intervals

Minimum rotation intervals\* are determined by the rate of breakdown of Escort® XP Herbicide applied. Escort® XP Herbicide breakdown in the soil is affected by soil pH, presence of soil microorganisms, soil temperature, and soil moisture. Low soil pH, high soil temperature, and high soil moisture increase Escort® XP Herbicide breakdown in soil, while high soil pH, low soil temperature, and low soil moisture slow Escort® XP Herbicide breakdown.

Of these 3 factors, only soil pH remains relatively constant. Soil temperature, and to a greater extent, soil moisture, can vary significantly from year to year and from area to area. For this reason, monitor soil temperature and soil moisture on a regular basis when considering any crop rotations.

\* The minimum rotation interval represents the period of time from the last application to the anticipated date of the next planting.

#### Soil pH Limitations

Escort® XP Herbicide must not be used on soils having a pH above 7.9, as extended soil residual activity could extend crop rotation intervals beyond normal. Under certain conditions, Escort® XP Herbicide could remain in the soil for 34 months or more, injuring wheat and barley. In addition, other crops planted in high-pH soils can be extremely sensitive to low concentrations of Escort® XP Herbicide.

#### Checking Soil pH

Before using Escort® XP Herbicide, determine the soil pH of the areas of intended use. To obtain a representative pH value for the test area, take several 0" to 4" samples from different areas of the field and analyze them separately. Consult local extension publications for additional information on recommended soil sampling procedures.

#### BIOASSAY

A field bioassay must be completed before rotating to any crop or grass species/variety not listed in the Rotation Intervals Table, or if the soil pH is not in the specified range, or if the use rate applied is not specified in the table.

To conduct a field bioassay, grow test strips of the crop(s) or grass(es) you plan to grow the following year in fields previously treated with Escort® XP Herbicide. Crop or grass response to the bioassay will indicate whether or not to rotate to the crop(s) or grass(es) grown in the test strips.

If a field bioassay is planned, check with your local Agricultural dealer or Bayer CropScience LP representative for information detailing the field bioassay procedure.

#### IMPORTANT PRECAUTIONS

• Grass species or varieties may differ in their response to various herbicides. If no information is available, limit the initial use of Escort® XP Herbicide to a small area.

- Components in a grass seed mixture will vary in tolerance to Escort® XP Herbicide so the final stand may not reflect the seed ratio.
- Under certain conditions, such as heavy rainfall, high pH, prolonged cold weather, or wide fluctuations in day/night temperatures, prior to or soon after Escort® XP Herbicide application, temporary discoloration and/or grass injury may occur. Escort® XP Herbicide applied to grass that is stressed by severe weather conditions, drought, low fertility, water-saturated soils, disease, or insect damage can result in grass injury. Severe winter stress, drought, disease, or insect damage before or following application also may result in grass injury.
- Applications of Escort® XP Herbicide to lands undersown with legumes may cause injury to the legumes. Legumes in a seeding mixture may be severely injured or killed following an application of Escort® XP Herbicide.
- The control of weeds in wheel track areas may be reduced if ground applications are made when dry, dusty field conditions exist. The addition of 2,4-D or MCPA may improve weed control under these conditions.

#### WEEDS CONTROLLED 1/3 to 1/2 ounce per acre

Annual sowthistle	Corn cockle
Aster	Cow cockle
Bahiagrass	Crown vetch
Beebalm	Dandelion
Bittercress	Dogfennel
Bitter sneezeweed	False chamomile
Black-eyed-susan	Fiddleneck tarweed
Blue mustard	Field pennycress
Bur buttercup	Flixweed
Chicory	Goldenrod
Clover	Lambsquarters
Cocklebur	Marestail/horseweed****
Common chickweed	Maximillion sunflower
Common groundsel	Miners lettuce
Common purslane	Pennsylvania smartweed
Common yarrow	Plains coreopsis
Conical catchfly	Plantain

(continued)



**WEEDS CONTROLLED (continued)**

**1/3 to 1/2 ounce per acre**

Redroot pigweed  
Redstem filaree  
Rough fleabane  
Shepherd's purse  
Silky crazyweed (locoweed)  
Smallseed falseflax  
Smooth pigweed  
Sweet clover  
Tansymustard

Treacle mustard  
Tumble mustard  
Wild carrot  
Wild garlic  
Wild lettuce  
Wild mustard  
Wooly croton  
Wood sorrel  
Yankeweed

**1/2 to 1 ounce per acre**

Blackberry  
Black henbane  
Broom snakeweed\*  
Buckhorn plantain  
Bull thistle  
Common crupina  
Common sunflower  
Curly dock  
Dewberry  
Dyer's woad  
Garlic mustard  
Gorse  
Halogeton  
Henbit

Honeysuckle  
Multiflora rose and other  
wild roses  
Musk thistle\*\*\*  
Oxeye daisy  
Plumeless thistle  
Prostrate knotweed  
Roserig gaillardia  
Seaside arrowgrass  
Sericea lespedeza  
Tansy ragwort  
Toasel  
Wild caraway

**1 to 2 ounces per acre**

Common mullein  
Common tansy  
Field bindweed\*\*  
Greasewood  
Gumweed  
Houndstongue  
Lupine  
Old world climbing fern  
(Lygodium)  
Perennial popperwood  
Poison hemlock

Purple loosestrife  
Purple scabious  
Scotch thistle  
Scouringrush  
Salsify  
Snowberry  
St. Johnswort  
Sulphur cinquefoil  
Western salsify  
Whiteweed (hoary cress)  
Wild Iris

**1 1/2 to 2 ounces per acre**

Canada thistle\*\*  
Dalmation toadflax\*\*  
Duncecap larkspur  
Russian knapweed\*\*

Tall larkspur  
Wild parsnip  
Yellow toadflax\*\*

**2 ounces per acre**

Onionweed

**3 to 4 ounces per acre**

Kudzu

- \* Apply fall through spring.
- \*\* Suppression, which is a visual reduction in weed competition (reduced population or vigor) as compared to untreated areas. Apply as a full coverage spray for best performance.
- \*\*\* Certain biotypes of musk thistle are more sensitive to Escort® XP Herbicide and may be controlled with rates of 1/4 to 1/2 ounce per acre. Treatments of Escort® XP Herbicide may be applied from rosette through bloom stages of development.
- \*\*\*\* Certain biotypes of mare's tail/horsetail are less sensitive to Escort® XP Herbicide and may be controlled by tank mixes with herbicides with a different mode of action.

**Problem Weed Control**

For broader spectrum control and for use on certain biotypes of broadleaf weeds which may be resistant to Escort® XP Herbicide and herbicides with the same mode of action, the following tank mixes may be used.

**Dicamba + 2,4-D**

Weed	Rate of Escort® XP Herbicide	Rate of dicamba (fluid ounces/acre)	Rate of 2,4-D (fluid ounces/acre)
Kochia control	1/2	8	16
Spotted knapweed control	1/2	8	16
Rush skeletonweed suppression	1	8	16

## INDUSTRIAL TURFGRASS UNIMPROVED ONLY

### Application Information

Escort® XP Herbicide is registered for selective weed control in unimproved industrial turfgrass where certain grasses are well established and desired as ground cover. Escort® XP Herbicide may also be used for the control of certain noxious and troublesome weeds in turfgrass.

In addition to conventional spray equipment, Escort® XP Herbicide may also be applied with invert emulsion equipment. When using an invert emulsion, mix the prescribed rate of Escort® XP Herbicide in the water phase.

Consult the "Weeds Controlled" table to determine which weeds will be controlled by the following application rates:

Turfgrass Type	Rate of Escort® XP Herbicide (ounces/acre)
Fescue and Bluegrass	1/4 to 1/2
Crested Wheatgrass and Smooth Brome	1/4 to 1
Bermudagrass	1/4 to 2

### Application Timing

Applications may be made at anytime of the year except when the soil is frozen.

When a spring application is made on fescue or bluegrass, a second application may be made during the summer after full seedhead maturation.

### Growth Suppression and Seedhead Inhibition (Chemical Mowing)

#### Application Information

Escort® XP Herbicide may be used for growth suppression and seedhead inhibition in well established fescue and bluegrass turfgrass at the use rate of 1/4 to 1/2 ounce per acre.

#### Tank Mix Combination

Escort® XP Herbicide may be tank mixed with "Embark" for improved performance in the regulation of growth and seedhead suppression. Tank mix 1/4 to 1/2 ounce of Escort® XP Herbicide with 1/8 to 1/4 pint of "Embark".

### Application Timing

Application may be made after at least 2 to 3 inches of new growth has emerged until the appearance of the seed stalk.

## IMPORTANT PRECAUTIONS —INDUSTRIAL TURFGRASS ONLY

- An application of Escort® XP Herbicide may cause temporary discoloration (chlorosis) or stunting of the turfgrasses. Use the lower specified rates for minimum discoloration or stunting.
- With fescue and bluegrass, sequential applications made during the same or consecutive growth periods (i.e. spring and fall) may result in excessive injury to turfgrass.
- Excessive injury may result when Escort® XP Herbicide is applied to turfgrass that is under stress from drought, insects, disease, cold temperatures (winter injury) or poor fertility.
- Escort® XP Herbicide is not recommended for use on bahiagrass.

## BRUSH CONTROL

### Application Information

Escort® XP Herbicide is registered for the control of undesirable brush growing in non-crop areas including grazed areas on these sites. Applications may be made by air, high volume ground application, low volume ground application and ultra-low volume ground application. Except as noted for multiflora rose, Escort® XP Herbicide must be applied as a spray to the foliage.

The application volume required will vary with the height and density of the brush and the application equipment used. Generally, aerial applications will require 15 to 25 gallons of water per acre; high volume ground application will require 100 to 400 gallons of water per acre; low volume ground application will require 20 to 50 gallons of water per acre; and ultra-low volume ground application will require 10 to 20 gallons of water per acre.

Regardless of the application volume and equipment used, thorough coverage of the foliage, particularly the terminal growing points, is necessary to optimize results.

### BRUSH SPECIES CONTROLLED

Species	High Volume Rate (ounces/100 gallon)	Broadcast Rate (ounces/acre)
Ash	1-2	1-3
Aspen	1-2	1-3
Black locust	1-2	1-3
Blackberry	1-2	1-3
Camelthorn	1-2	1-3
Cherry	1-2	1-3
Coltonwood	1-2	2-3
Eastern red cedar	1-2	2-3
Elder	1-2	2-3
Elm	1-2	1-3
Firs	3	1-2
Hawthorn	1-2	1-3
Honeysuckle	1-2	1/2-1
Mulberry	1-2	2-3
Multiflora rose	1-2	1-3
Muscadine (wild grape)	1-2	2-3
Oaks	1-2	1-3
Ocean spray (Holodiscus)	1-2	2-3
Osage orange	1-2	2-3
Red maple	1-2	2-3
Salmonberry	1/2-1	1-3
Snowberry	1/2-1	1-3
Spruce (black and white)	3	2-3
Thimbleberry	1/2-1	1-3
Tree of heaven (Ailanthus)	1-2	1-2
Wild roses	1/2-1	1-3
Willow	1/2-1	1-3
Yellow poplar	1/2-1	1-3

For low volume and ultra-low volume ground applications, mix 4 to 8 ounces of Escort® XP Herbicide per 100 gallons of spray solution.

### Application Timing

Make a foliar application of the specified rate of Escort® XP Herbicide during the period from full leaf expansion in the spring until the development of full fall coloration on deciduous species to be controlled. Coniferous species may be treated at anytime during the growing season.

### Spot Treatment

Escort® XP Herbicide may be used for the control of many species of weeds including noxious/invasive weeds in certain established grasses growing on non-crop areas.

Refer to the "Weeds Controlled" section for a listing of susceptible weed species and the application rate per acre per the target weed.

Or, mix one gram of Escort® XP Herbicide per one gallon of water along with a surfactant. Spray to the point of wetting the entire surface of the target weeds, approximately 40 gallons of solution per acre.

### Tank Mix Combinations—

Escort® XP Herbicide may be tank mixed with any product labeled for non-crop brush control at the application rates specified on the companion product's label for the pests specified on the product's companion label. Read and follow the label instructions of both products when tank mixing. Follow the most restrictive limitations of any of the product labels being tank mixed.

### Low Rate Applications

#### Imazapyr (2 pound active per gallon)

Combine 1 to 2 ounces of Escort® XP Herbicide with 1 to 4 pints of imazapyr herbicide per acre and apply as a broadcast spray. For aerial applications use a minimum of 15 gallons per acre spray volume. In addition to species listed above controlled by Escort® XP Herbicide, this combination controls black gum, hophornbeam, sassafras, sweetgum, Vaccinium species, dogwood, myrtle dahoon, hickories, and persimmon.

#### Picloram\* (2 pound active per gallon) + Imazapyr (2 pound active per gallon)

Combine 1 to 1 1/2 ounce of Escort® XP Herbicide with 2 to 8 fluid ounces of imazapyr and 1 to 2 pints of picloram per 100 gallons of water. Apply as a high volume spray. This tank mix controls cherry, elms, box elder, maples, hackberry, redbud, ash, oaks (including shingle oak), black locust, and sassafras.

\*Picloram is a restricted use pesticide.



#### Spotgun Basal Soil Treatment

For control of multiflora rose, prepare a spray suspension of Escort® XP Herbicide by mixing 1 ounce per gallon of water. Mix vigorously until the Escort® XP Herbicide is dispersed and agitate periodically while applying the spray suspension.

Apply the spray preparation with an exact delivery handgun applicator. Apply at the rate of 4 milliliters for each 2 feet of rose canopy diameter. Direct the treatment to the soil within 2 feet of the stem union. When treating large plants and more than one delivery is required, make applications on opposite sides of the plant.

For best results, make applications from early spring to summer.

### IMPORTANT PRECAUTIONS —NON-CROP BRUSH ONLY

- When using tank mixtures of Escort® XP Herbicide with companion herbicides, read and follow all use instructions, application rates, warnings, and precautions appearing on the labels. Follow the most restrictive label instructions for each of the herbicides used.

### SPRAY EQUIPMENT

Low rates of Escort® XP Herbicide can kill or severely injure most crops. Following an Escort® XP Herbicide application, the use of spray equipment to apply other pesticides to crops on which Escort® XP Herbicide is not registered may result in their damage. The most effective way to reduce this crop damage potential is to use dedicated mixing and application equipment.

### MIXING INSTRUCTIONS

1. Fill the tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of Escort® XP Herbicide.
3. Continue agitation until the Escort® XP Herbicide is fully dispersed, at least 5 minutes.
4. Once the Escort® XP Herbicide is fully dispersed, maintain agitation and continue filling tank with water. Escort® XP Herbicide must be thoroughly mixed with water before adding any other material.
5. As the tank is filling, add tank mix partners (if desired) then add the necessary volume of nonionic surfactant. Always add surfactant last.

6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
7. Escort® XP Herbicide spray preparations are stable if they are pH neutral or alkaline and stored at or below 100° F.
8. If Escort® XP Herbicide and a tank mix partner are to be applied in multiple loads, pre-slurry the Escort® XP Herbicide in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of the Escort® XP Herbicide.

### PRODUCT PRECAUTIONS

- When used as directed, there is no grazing or haying restriction for use rates of 1 2/3 ounce per acre or less. At use rates greater than 1 2/3 ounce per acre and up to 3 1/3 ounce per acre, forage grasses may be cut for hay, fodder or green forage and fed to livestock, including lactating animals, 3 days after treatment.
- Injury to or loss of desirable trees or other plants may result if spray equipment is drained or flushed on or near these trees or plants, or on areas where their roots may extend, or in locations where the product may be washed or moved into contact with their roots.
- Treatment of powdery, dry soil or light, sandy soil when there is little likelihood of rainfall soon after treatment may result in off target movement and possible damage to susceptible crops when soil particles are moved by wind or water. Injury to crops may result if treated soil is washed, blown, or moved onto land used to produce crops. Exposure to Escort® XP Herbicide may injure or kill most crops. Injury may be more severe when the crops are irrigated. Do not apply Escort® XP Herbicide when these conditions are identified and powdery, dry soil or light or sandy soils are known to be prevalent in the area being treated.
- Applications made where runoff water flows onto agricultural land may injure crops. Applications made during periods of intense rainfall, to soils saturated with water, to surfaces paved with materials such as asphalt or concrete, or to soils through which rainfall will not readily penetrate may result in runoff and movement of Escort® XP Herbicide.
- Do not treat frozen or snow covered soil.
- Leave treated soil undisturbed to reduce the potential for Escort® XP Herbicide movement by soil erosion due to wind or water.

## PRODUCT RESTRICTIONS

- Do not use on lawns, walks, driveways, tennis courts, or similar areas.
- Do not apply through any type of irrigation system.
- Do not use this product in the following counties of Colorado: Saguache, Rio Grande, Alamosa, Costilla and Conejos.
- Do not use this product in California.

## SPRAYER CLEANUP

Spray equipment must be cleaned before Escort® XP Herbicide is sprayed. Follow the cleanup procedures specified on the labels of previously applied products. If no directions are provided, follow the six steps outlined below.

When multiple loads of Escort® XP Herbicide are applied, it is recommended that at the end of each day of spraying, the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits that can accumulate in the application equipment.

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gallon of ammonia (contains 3% active minimum) for every 100 gallons of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 minutes. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. Dispose of the rinsate on a labeled site or at an approved waste disposal facility. If a commercial cleaner is used follow the commercial cleaner directions for rinsate disposal.

### Notes:

1. Mixing chlorine bleach with ammonia can cause dangerous gases to form. Clean spray equipment outdoors.
2. Use steam cleaning or other commercial cleaners to facilitate the removal of any caked pesticide deposits.

3. When Escort® XP Herbicide is tank mixed with other pesticides, all cleanout procedures for each product must be examined and the most rigorous procedure must be followed.
4. In addition to this cleanout procedure, all pre-cleanout guidelines on subsequently applied products must be followed as per the individual product labels.

## SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

## IMPORTANCE OF DROPLET SIZE

The most effective drift management strategy is to apply the largest droplets which are consistent with pest control objectives. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions.

A droplet size classification system describes the range of droplet sizes produced by spray nozzles. The American Society of Agricultural and Biological Engineers (ASABE) provide a Standard that describes droplet size spectrum categories defined by a number of reference nozzles (fine, coarse, etc.). Droplet spectra resulting from the use of a specific nozzle may also be described in terms of volume mean diameter (VMD). Coarser droplet size spectra have larger VMD's and lower drift potential.

## Controlling Droplet Size - General Techniques

- **Nozzle Type** - Select a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. The use of low-drift nozzles will reduce drift potential.
- **Pressure** - The lowest spray pressures recommended for the nozzle produce the largest droplets. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, using a higher-capacity nozzle instead of increasing pressure results in the coarsest droplet spectrum.
- **Flow Rate/Orifice Size** - Using the highest flow rate nozzles (largest orifice) that are consistent with pest control objectives reduces the potential for spray drift. Nozzles with higher rated flows produce coarser droplet spectra.



### **Controlling Droplet Size - Aircraft**

- Nozzle Type - Solid stream, or other low drift nozzles produce the coarsest droplet spectra.
- Number of Nozzles - Using the minimum number of nozzles with the highest flow rate that provide uniform coverage will produce a coarser droplet spectrum
- Nozzle Orientation - Orienting nozzles in a manner that minimizes the effects of air shear will produce the coarsest droplet spectra. For some nozzles, such as solid stream, pointing the nozzles straight back parallel to the airstream will produce a coarser droplet spectrum than other orientations.
- Pressure - Selecting the pressure that produces the coarsest droplet spectrum for a particular nozzle and airspeed reduces spray drift potential. For some nozzle types, such as solid streams, lower pressures can produce finer droplet spectra and increase drift potential.

### **BOOM LENGTH (AIRCRAFT), AND APPLICATION HEIGHT**

- Boom Length (aircraft) - Using shorter booms decreases drift potential. Boom lengths are expressed as a percentage of an aircraft's wingspan or a helicopter's rotor blade diameter. Shorter boom length and proper positioning can minimize drift caused by wingtip or rotor vortices.
- Application Height (aircraft) - Applications made at the lowest height that are consistent with pest control objectives and the safe operation of the aircraft will reduce the potential for spray drift.
- Application Height (ground) - Applications made at the lowest height consistent with pest control objectives, and that allow the applicator to keep the boom level with the application site and minimize bounce, will reduce the exposure of spray droplets to evaporation and wind, and reduce spray drift potential.

### **WIND**

Drift potential is lowest when applications are made in light to gentle sustained winds (2-10 mph), which are blowing in a constant direction. Many factors, including droplet size and equipment type also determine drift potential at any given wind speed. **AVOID GUSTY OR WINDLESS CONDITIONS.**

Local terrain can also influence wind patterns. Every applicator is expected to be familiar with local wind patterns and how they affect spray drift.

### **TEMPERATURE AND HUMIDITY**

Setting up equipment to produce larger droplets to compensate for droplet evaporation can reduce spray drift potential. Droplet evaporation is most severe when conditions are both hot and dry.

### **SURFACE TEMPERATURE INVERSIONS**

Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which may cause small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Mist or fog may indicate the presence of an inversion in humid areas. Inversions may also be identified by producing smoke and observing its behavior. Smoke that remains close to the ground, or moves laterally in a concentrated cloud under low wind conditions indicates a surface inversion. Smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are minimizing drift potential and not interfering with uniform deposition of the product.

### **AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS**

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, that it is configured properly, and that drift potential has been minimized.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Read the specific crop use and application equipment instructions to determine if an air assisted field crop sprayer can be used.

## SENSITIVE AREAS

Making applications when there is a sustained wind moving away from adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is an effective way to minimize the effect of spray drift.

## DRIFT CONTROL ADDITIVES

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution. Preferred drift control additives have been certified by the Chemical Producers and Distributors Association (CPDA).

## STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store product in original container only. Store in a cool, dry place.

**Pesticide Disposal:** Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

### Container Handling:

Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.

**Nonrefillable Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds):** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 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, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, 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.

**Nonrefillable Plastic and Metal Containers (Capacity Greater Than 50 Pounds):** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 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. 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. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, 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.

**Nonrefillable Plastic and Metal Containers, e.g., Intermediate Bulk Containers (IBC) (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down):** Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom, and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. For Metal Containers, 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.



## STORAGE AND DISPOSAL (continued)

**Nonrefillable Paper or Plastic Bags, Fiber Sacks Including Flexible Intermediate Bulk Containers (FIBC) or Fiber Drums With Liners:** Nonrefillable container. Do not reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

**Refillable Fiber Drums With Liners:** Refillable container (fiber drum only). Refilling Fiber Drum: Refill this fiber drum with Escort® XP Herbicide containing metsulfuron methyl only. Do not reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Disposing of Fiber Drum and/or Liner: Do not reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

**All Other Refillable Containers:** Refillable container. Refilling Container: Refill this container with Escort® XP Herbicide containing metsulfuron methyl only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use the container, contact Bayer CropScience LP at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, do not reuse or transport container, contact Bayer CropScience LP at the number below for instructions. Disposing of Container: Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom, and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour, or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, 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.

**Outer Foil Pouches of Water Soluble Packets (WSP):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or, dispose of the empty outer foil pouch in the trash as long as WSP is unbroken. If the outer pouch contacts the formulated product in any way, the pouch must be triple rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer pouch as described previously.

Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact Bayer CropScience LP at 1-800-334-7577, day or night.

Bayer (reg'd), the Bayer Cross (reg'd), Escort®, Oust® and Velpar® are registered trademarks of Bayer.

Embarc is a registered trademark of PBI Gordon Corporation.

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

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, plant injury, other property damage, as well as other unintended consequences may result because of factors beyond the control of Bayer CropScience LP. Those factors include, but are not limited to, weather conditions, presence of other materials or the manner of use or application. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE LP MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of Bayer CropScience LP is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE LP DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

**LIMITATIONS OF LIABILITY:** TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT BAYER CROPSCIENCE LP'S ELECTION, THE REPLACEMENT OF PRODUCT.

For product information call: 1-800-331-2867

Produced for:  
Bayer Environmental Science  
A Division of Bayer CropScience LP  
2 T. W. Alexander Drive  
Research Triangle Park, NC 27709

Bayer



# ARSENAL<sup>®</sup>

SPECIMEN

herbicide

**For control of undesirable vegetation growing within specified aquatic sites, forestry sites, pasture/rangeland, and nonagricultural lands; and for establishment and maintenance of wildlife openings, release of unimproved Bermudagrass and Bahiagrass, bareground weed control, and for use under certain paved surfaces**

**Active Ingredient:**

isopropylamine salt of imazapyr: (2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid)\* ..... 27.8%

**Other Ingredients:** ..... 72.2%

**Total:** ..... 100.0%

\* Equivalent to 22.6% 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid or 2 pounds acid per gallon

**EPA Reg. No. 241-346**

**EPA Est. No.**

**KEEP OUT OF REACH OF CHILDREN  
CAUTION/PRECAUCIÓN**

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 inside for complete **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

**In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).**

**Net Contents:**

BASF Corporation  
26 Davis Drive  
Research Triangle Park, NC 27709

 **BASF**  
The Chemical Company

<b>FIRST AID</b>	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• <b>DO NOT</b> induce vomiting unless told to by a poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>HOTLINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).	

## Precautionary Statements

### Hazards to Humans and Domestic Animals

**CAUTION.** Harmful if swallowed. Avoid contact with eyes or clothing.

### Personal Protective Equipment (PPE)

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

**Mixers, loaders, applicators, and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions are given for washables, 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.

### Engineering Controls

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

## USER SAFETY RECOMMENDATIONS

### Users should:

- Wash hands with plenty of soap and water before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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.

### Physical and Chemical Hazards

Spray solutions of **Arsenal® herbicide** must be mixed, stored, and applied only in stainless steel, fiberglass, plastic, and plastic-lined steel containers.

Thoroughly clean application equipment, including landing gear, immediately after use of this product. Prolonged exposure of this product to uncoated steel (except stainless steel) surfaces may result in corrosion and failure of the exposed part. The maintenance of an organic coating (paint) may prevent corrosion.

### Environmental Hazards

This product is toxic to plants. Drift and runoff may be hazardous to plants in water adjacent to treated areas. **DO NOT** apply to water except as specified in this label. Treatment of aquatic weeds may result in oxygen depletion or loss because of decomposition of dead plants. This oxygen loss may cause suffocation of some aquatic organisms. **DO NOT** treat more than 1/2 of the surface area of the water in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outward in bands to allow aquatic organisms to move into untreated areas. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

This pesticide is toxic to vascular plants and must be used strictly in accordance with the drift precautions on the label.

## Directions For Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

**Arsenal® herbicide** must be used only in accordance with the instructions on the label attached to the container. Keep containers closed to avoid spills and contamination.

**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.

### 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 **48 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
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material
- Protective eyewear

### NONAGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**DO NOT** enter or allow others to enter treated areas until sprays have dried.

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal.

### Pesticide Storage

**DO NOT** store below 10° F.

### Pesticide Disposal

Wastes resulting from the use of this product must be disposed of on-site or at an approved waste disposal facility.

### Container Handling

**Nonrefillable Container. DO NOT reuse or refill this container.**

Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

#### Triple rinse containers small enough to shake

**(capacity ≤ 5 gallons) 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 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.

#### Triple rinse containers too large to shake

**(capacity > 5 gallons) as follows:** 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. 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.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**Refillable Container.** Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

(continued)

## STORAGE AND DISPOSAL *(continued)*

### Container Handling *(continued)*

**Triple rinse as follows:** 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.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

### In Case of Emergency

In case of large-scale spillage regarding this product, call:

- CHEMTREC 1-800-424-9300
- BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

### Steps to be taken in case material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

## Product Information

**Arsenal® herbicide** is an aqueous solution to be mixed with water and a surfactant and applied as a spray solution to control undesirable vegetation growing within specified aquatic sites, forestry sites, pasture/rangeland and nonagricultural lands. Aquatic sites consist of standing and flowing water, estuarine/marine, wetland, and riparian areas. Nonagricultural lands include private, public and military lands as follows: uncultivated nonagricultural areas (including airports, highway, railroad and utility rights-of-way, and sewage disposal areas); uncultivated agricultural areas - noncrop producing (including farmyards, fuel

storage areas, fence rows, nonirrigation ditchbanks, and barrier strips); industrial sites - outdoor (including lumberyards, pipeline and tank farms); and natural areas (including wildlife management areas, wildlife openings, wildlife habitats, recreation areas, campgrounds, trailheads, and trails). **Arsenal** may also be used for the release of unimproved Bermudagrass and Bahiagrass, for bareground weed control, and for use under certain paved surfaces.

### Herbicidal Activity

**Arsenal** will control most annual and perennial grass and broadleaf weeds in addition to many brush and vine species with some residual control of undesirable species that germinate above the waterline. **Arsenal** is readily absorbed through emergent leaves and stems and is translocated rapidly throughout the plant with accumulation in the meristematic regions. For maximum activity, weeds should be growing vigorously at the time of application, and the spray solution should include a surfactant (see **Adjuvants** section for specific use directions). Treated plants stop growing soon after spray application. Chlorosis appears first in the newest leaves, and necrosis spreads from this point. In perennials, the herbicide is translocated into and kills underground or submerged storage organs, which prevents regrowth. Chlorosis and tissue necrosis may not be apparent in some plant species until 2 or more weeks after application. Complete kill of plants may not occur for several weeks. **Arsenal** applications are rainfast 1 hour after treatment.

## Product Use and Restrictions

Applications may be made for control of undesirable vegetation growing within specified aquatic sites, forestry sites, pasture/rangeland and nonagricultural lands. Aquatic sites consist of standing and flowing water; estuarine/marine, wetland, and riparian areas; for control of most annual and perennial grass weeds, broadleaf weeds, vines and brambles, and hardwood brush and trees for forestry site preparation and release of conifers from woody and herbaceous competition. **Arsenal** may also be used for selective woody and herbaceous weed control in natural regeneration of certain conifers (see **Conifer Release Treatment**).

Nonagricultural lands include private, public and military lands as follows: uncultivated nonagricultural areas (including airports, highway, railroad and utility rights-of-way, and sewage disposal areas); uncultivated agricultural areas - noncrop producing (including farmyards, fuel storage areas, fence rows, nonirrigation ditchbanks, and barrier strips); industrial sites - outdoor (including lumberyards, pipeline and tank farms); and natural areas (including wildlife management areas, wildlife openings, wildlife habitats, recreation areas, campgrounds, trailheads, and trails).



## Restrictions and Limitations

- **DO NOT** use on food crops.
- **DO NOT** apply this product within 1/2 mile upstream of an active potable water intake in flowing water (i.e. river, stream, etc.) or within 1/2 mile of an active potable water intake in a standing body of water, such as a lake, pond, or reservoir.
- **DO NOT** apply to water used for irrigation except as described in **Product Use and Restrictions** section of this label.
- Keep from contact with fertilizers, insecticides, fungicides, and seeds.
- **DO NOT** drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the treated soil may be washed or moved into contact with their roots.
- **DO NOT** use on lawns, walks, driveways, tennis courts, or similar areas.
- **DO NOT** side trim desirable vegetation with this product unless severe injury and plant death can be tolerated. Prevent drift of spray to desirable plants.
- Clean application equipment after using this product by thoroughly flushing with water.

## Nonagricultural Lands and Forestry Sites

- **DO NOT** apply more than 1.5 lbs acid equivalent (ae) imazapyr (equivalent to 96 fl ozs of **Arsenal**<sup>®</sup> herbicide) per acre per year.

## Pasture/Rangeland Sites

- For spot treatment only.
- **DO NOT** treat more than 1/10 of the available area to be grazed or cut for hay.
- **DO NOT** apply more than 0.75 lb ae imazapyr (equivalent to 48 fl ozs of **Arsenal**) per acre per year.

## Aquatic Sites

- **DO NOT** apply more than 1.5 lbs ae imazapyr (equivalent to 96 fl ozs of **Arsenal**) per acre per year.
- **Public waters** - Application of **Arsenal** to water can only be made by federal or state agencies, such as Water Management District personnel, municipal officials, and the U.S. Army Corps of Engineers, or those applicators who are licensed or certified as aquatic pest control applicators and are authorized by the state or local government. Treatment to other than non-native invasive species is limited to only those plants that have been determined to be a nuisance by a federal or state government entity.
- **Permitting** - Consult local state fish and game agency and water control authorities before applying this product to public water. Permits may be required to treat such water.
- **Private waters** - Applications may be made to private waters that are still, such as ponds, lakes, and drainage ditches where there is minimal or no outflow to public waters.
- **Aerial application** - Aerial application to aquatic sites is restricted to helicopter only.

- **Irrigation water** - Application to water used for irrigation that results in **Arsenal** residue greater than 1.0 ppb **MUST NOT** be used for irrigation purposes for 120 days after application or until **Arsenal** residue levels are determined by laboratory analysis or other appropriate means of analysis to be 1.0 ppb or less. When applications are made within 500 feet of an active irrigation intake, **DO NOT** irrigate for at least 24 hours following application to allow for dissipation.

## Recreational Use of Water in

### Treatment Area

There are no restrictions on the use of water in the treatment area for recreational purposes, including swimming and fishing.

## Livestock Use of Water in/from

### Treatment Area

There are no restrictions on livestock consumption of water from the treatment area.

## Restrictions for Potable Water Intakes

**DO NOT** apply **Arsenal** directly to water within 1/2 mile upstream of an active potable water intake in flowing water (i.e. river, stream, etc.) or within 1/2 mile of an active potable water intake in a standing body of water such as a lake, pond, or reservoir. To make aquatic applications around and within 1/2 mile of active potable water intakes, the water intake must be turned off during application and for a minimum of 48 hours after application. These aquatic applications may be made only in cases where there are alternative water sources or holding ponds that would permit turning off an active potable water intake for a minimum period of 48 hours after applications.

**NOTE:** Existing potable water intakes that are no longer in use, such as those replaced by connections to wells or a municipal water system, are not considered to be active potable water intakes. This restriction does not apply to intermittent, inadvertent overspray of water in terrestrial use sites.

## Quiescent or Slow-moving Waters

In lakes and reservoirs, **DO NOT** apply **Arsenal** within 1 mile of an active irrigation water intake during the irrigation season. Applications less than 1 mile from an active irrigation water intake may be made during the off-season if the irrigation intake will remain inactive for a minimum of 120 days after application or until **Arsenal** residue levels are determined by laboratory analysis or other appropriate means of analysis to be 1.0 ppb or less.

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## Precautions for Avoiding Injury to Nontarget Plants

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Untreated desirable plants can be affected by root uptake of **Arsenal® herbicide** from treated soil. Injury or loss of desirable plants may result if **Arsenal** is applied on or near desirable plants, on areas where their roots extend, or in locations where the treated soil may be washed or moved into contact with their roots. When making application along shorelines where desirable plants may be present, use caution to avoid spray contact with their foliage or spray application to the soil in which they are rooted. Shoreline plants that have roots which extend into the water in an area where **Arsenal** has been applied generally will not be adversely affected by uptake of the herbicide from the water.

If treated vegetation is to be removed from the application site, **DO NOT** use the vegetative matter as mulch or compost on or around desirable species.

### Managing Off-target Movement

#### Aerial Application

- Applicators are required to use a coarse or coarser droplet size (ASABE S572) or, if specifically using a spinning atomizer nozzle, applicators are required to use a volume mean diameter (VMD) of 385 microns or greater for release heights below 10 feet. Applicators are required to use a very coarse or coarser droplet size or, if specifically using a spinning atomizer nozzle, applicators are required to use a VMD of 475 microns or greater for release heights above 10 feet. Applicators must consider the effects of nozzle orientation and flight speed when determining droplet size.
- Applicators are required to use upwind swath displacement.
- The boom length must not exceed 60% of the wingspan or 90% of the rotor-blade diameter to reduce spray drift.
- Applications with wind speeds less than 3 mph and with wind speeds greater than 10 mph are prohibited.
- Applications into temperature inversions are prohibited.

#### Ground Boom Application

- Applicators are required to use a nozzle height below 4 feet above the ground or plant canopy and coarse or coarser droplet size (ASABE S572) or, if specifically using a spinning atomizer nozzle, applicators are required to use a volume mean diameter (VMD) of 385 microns or greater.
- Applications with wind speeds greater than 10 mph are prohibited.
- Applications into temperature inversions are prohibited.

#### Wind Erosion

Avoid treating powdery, dry, or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.

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## Adjuvants

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Postemergence applications of **Arsenal** require the addition of a spray adjuvant. When making aquatic applications, only spray adjuvants approved or appropriate for aquatic use must be used.

### Nonionic Surfactant

Use a nonionic surfactant (NIS) at the rate of 0.25% volume/volume (v/v) or higher (see manufacturer's label) of the spray solution (0.25% v/v is equivalent to 1 quart in 100 gallons). For best results, select a nonionic surfactant with a hydrophilic-to-lipophilic balance (HLB) ratio between 12 and 17 with at least 70% surfactant in the formulated product. Alcohol, fatty acid, oil, ethylene glycol, or diethylene glycol should not be considered as surfactants to meet the above requirements.

### Methylated Seed Oil or Vegetable Oil Concentrate

Instead of a surfactant, a methylated seed oil (MSO) or vegetable-based seed oil concentrate may be used at the rate of 1.5 to 2 pints per acre. When using spray volumes greater than 30 gallons per acre, mix MSO or vegetable-based seed oil concentrates at a rate of 1% of total spray volume, or alternatively use a nonionic surfactant as described above. Research indicates that these oils may aid in **Arsenal** deposition and uptake by plants under moisture or temperature stress.

### Silicone-based Surfactant

See manufacturer's label for specific rates. Silicone-based surfactants may reduce the surface tension of the spray droplet allowing greater spreading on the leaf surface as compared to conventional nonionic surfactants. However, some silicone-based surfactants may dry too quickly, limiting herbicide uptake.

### Invert Emulsions

**Arsenal** can be applied as an invert emulsion. The spray solution results in an invert (water-in-oil) spray emulsion designed to minimize spray drift and spray runoff, resulting in more herbicide on the target foliage. The spray emulsion may be formed in a single tank (batch mixing) or injected (in-line mixing). Consult the invert chemical label for proper mixing directions.

### Other

An antifoaming agent, spray pattern indicator, or drift-reducing agent may be applied at the product labeled rate if necessary or desired.

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## Tank Mixes

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**Arsenal** may be tank mixed with other herbicides.

Consult manufacturer's labels for specific rate restrictions and weeds controlled. Always follow the more restrictive label restrictions and precautions for all products used when making an application involving tank mixes.

## Application Methods

**Arsenal**® herbicide may be selectively applied using low-volume directed application techniques or may be broadcast-applied using ground equipment, watercraft, or aircraft. Aerial applications to aquatic sites must be made by helicopter. In addition, **Arsenal** may also be applied using cut-stump, cut-stem, and frill or girdle treatment techniques within nonagricultural lands, pasture/rangeland, and aquatic sites; see **Aerial Application** and **Ground Application** sections for additional details.

### Aerial Application

All precautions must be taken to minimize or eliminate spray drift. Both fixed-wing aircraft and helicopters can be used to apply **Arsenal** on nonagricultural lands, but only helicopters can be used for aquatic applications. **DO NOT** make applications by fixed-wing aircraft or helicopter unless appropriate buffer zones can be maintained to prevent spray drift out of the target area; or when treating open tracts of land, spray drift as a result of fixed-wing aircraft application can be tolerated. Aerial equipment designed to minimize spray drift, such as a helicopter equipped with a **Microfoil™ boom**, **Thru-Valve™ boom**, or raindrop nozzles, must be used and calibrated. Except when applying with a **Microfoil boom**, a drift control agent may be added at the specified label rate. **DO NOT** side trim with **Arsenal** unless death of treated tree can be tolerated.

Uniformly apply the specified amount of **Arsenal** in 2 to 30 gallons of water per acre. A foam-reducing agent may be added at the specified label rate, if needed.

Thoroughly clean application equipment, including landing gear, immediately after use of this product. Prolonged exposure of this product to uncoated steel (except stainless steel) surfaces may result in corrosion and failure of the exposed part. The maintenance of an organic coating (paint) may prevent corrosion.

### Ground Application

#### Foliar Application

##### Low-volume Foliar Application

Use equipment calibrated to deliver 5 to 20 gallons of spray solution per acre. To prepare the spray solution, thoroughly mix in water 0.5% to 5% **Arsenal** plus surfactant; see the **Adjuvants** section of this label for specific use directions. A foam-reducing agent may be applied at the specified label rate, if needed. For difficult-to-control species (see **Aquatic Weed Control** and **Terrestrial Weed Control** sections for relative susceptibility of weed species), use the higher concentrations of herbicide and/or spray volumes, but **DO NOT** apply more than 3 quarts of **Arsenal** per acre in aquatic sites and nonagricultural lands and 1.5 quarts per acre in pasture/rangeland. Excessive wetting of foliage is not necessary.

For low-volume foliar application, select proper nozzles to avoid overapplication. Proper application is critical to ensure desirable results. Best results are achieved when spray covers the crown and approximately 70 percent of the plant. The use of an even, flat-fan tip with a spray angle of 40 degrees or less will aid in proper deposition.

Appropriate tip sizes include 4004E or 1504E. For a straight-stream and cone pattern, adjustable cone nozzles, such as 5500 X3 or 5500 X4, may be used. Attaching a rollover valve onto a Spraying Systems Model 30 gunjet or other similar spray gun allows for the use of both flat-fan and cone tips on the same gun.

Moisten, but **DO NOT** drench target vegetation causing spray solution to run off.

**Low-volume Foliar Application with Backpack.** For low-growing species, spray down on the crown, covering crown and penetrating approximately 70% of the plant.

For target species 4 to 8 feet tall, swipe the sides of target vegetation by directing spray to at least 2 sides of the plant in smooth vertical motions from the crown to the bottom. Make sure to cover the crown whenever possible.

For target species over 8 feet tall, lace sides of target vegetation by directing spray to at least 2 sides of the target in smooth zigzag motions from crown to bottom.

**Low-volume Foliar Application with Hydraulic Handgun Application Equipment.** Use the same technique as described for **Low-volume Foliar Application with Backpack**.

For broadcast application, simulate a gentle rain near the top of target vegetation allowing spray to contact the crown and penetrate the target foliage without falling to the understory. Herbicide spray solution that contacts the understory may result in severe injury or death of plants in the understory.

##### High-volume Foliar Application

For optimum performance when spraying medium-density to high-density vegetation, use equipment calibrated to deliver up to 100 gallons of spray solution per acre (GPA). Spray solutions exceeding 100 GPA may result in excessive spray runoff, causing increased ground cover injury and injury to desirable species.

To prepare the spray solution, thoroughly mix **Arsenal** in water and add a surfactant; see **Adjuvants** section for specific use directions and rates for surfactants. A foam-reducing agent may be added at the specified label rate, if needed. For difficult-to-control species (see **Aquatic Weed Control** and **Terrestrial Weed Control** sections for relative susceptibility of weed species), use the higher concentrations of herbicide and/or spray volumes, but **DO NOT** apply more than 3 quarts of **Arsenal** per acre in aquatic sites and nonagricultural lands and 1.5 quarts per acre in pasture/rangeland. Uniformly cover the foliage of the vegetation to be controlled, but **DO NOT** apply to runoff. Excessive wetting of foliage is not necessary.

## Side Trimming

**DO NOT** side trim with **Arsenal® herbicide** unless severe injury or death of the treated tree can be tolerated. **Arsenal** is readily translocated and can result in death of the entire tree.

## Cut-surface Treatment

**Arsenal** may be used to control undesirable woody vegetation by applying the **Arsenal** solution to the cambium area of freshly cut stump surfaces or to fresh cuts on the stem of target woody vegetation. Application can be made any time of the year except during periods of heavy sap flow in the spring. **DO NOT** overapply solution causing runoff from the cut surface.

Injury may occur to desirable woody plants if shoots extend from the same root system or their root systems are grafted to those of the treated tree.

## Cut-surface Application with Dilute and Concentrate Solutions

**Arsenal** may be mixed as either a concentrate or dilute solution. The dilute solution may be used for application to the cut surface of the stump or to cuts on the stem of target woody vegetation. Concentrate solutions may be used for application to cuts on the stem. Use of the concentrate solution permits application to fewer cuts on the stem, especially for large-diameter trees. Follow application instructions for proper application techniques for each type of solution.

- To prepare a dilute solution, mix 8 to 12 fluid ounces of **Arsenal** with 1 gallon of water. A surfactant or penetrating agent may improve uptake through partially callused cambiums.
- To prepare a concentrate solution, mix 2 quarts of **Arsenal** with no more than 1 quart of water.

## Cut-stump Treatment

**Dilute Solution.** Spray or brush the solution onto the cambium area of the freshly cut stump surface. Ensure that the solution thoroughly wets the entire cambium area (the wood next to the bark of the stump).

## Cut-stem Treatment (Injection, Hack-and-squirt)

**Dilute Solution.** Using standard injection equipment, apply 1 milliliter (mL) of solution at each injection site around the tree with no more than 1-inch intervals between cut edges. Ensure that the injector completely penetrates the bark at each injection site.

**Concentrate Solution.** Using standard injection equipment, apply 1 mL of solution at each injection site. Make at least 1 injection cut for every 3 inches of diameter at breast height (DBH) on the target tree. For example, a 3-inch DBH tree will receive 1 injection cut, and a 6-inch DBH tree will receive 2 injection cuts. On trees requiring more than 1 injection site, place the injection cuts at approximately equal intervals around the tree.

## Frill or Girdle Treatment

Using a hatchet, machete, or chainsaw, make cuts through the bark and completely around the tree to expose the cambium. The cut should angle downward extending into the cambium enough to expose at least 2 growth rings. Using a spray applicator or brush, apply a 25% to 100% solution of **Arsenal** into each cut until thoroughly wet. Avoid applying so much herbicide that runoff to the ground or water occurs.

## Forestry Use

## Site Preparation Treatment

**Arsenal** may be used to control labeled grass weeds, broadleaf weeds, vines and brambles, and woody brush and trees on forest sites in advance of regeneration for the following conifer crop species:

Common Name	Scientific Name	Rate (# ozs/A)
Loblolly pine	<i>Pinus taeda</i>	48 to 80
Loblolly X pitch hybrid		
Longleaf pine	<i>Pinus palustris</i>	
Shortleaf pine	<i>Pinus echinata</i>	
Virginia pine	<i>Pinus virginiana</i>	40 to 64
Slash pine	<i>Pinus elliotii</i>	
Coastal redwood	<i>Sequoia sempervirens</i>	24 to 48
Douglas fir	<i>Pseudotsuga menziesii</i>	
Western hemlock	<i>Tsuga heterophylla</i>	
California red fir	<i>Abies magnifica</i>	24 to 40
California white fir	<i>Abies concolor</i>	
Jack pine	<i>Pinus banksiana</i>	24 to 32
Lodgepole pine	<i>Pinus contorta</i>	
Pitch pine	<i>Pinus rigida</i>	
Ponderosa pine	<i>Pinus ponderosa</i>	
Sugar pine	<i>Pinus lambertiana</i>	
White pine	<i>Pinus strobus</i>	
Black spruce	<i>Picea mariana</i>	
Red spruce	<i>Picea rubens</i>	
White spruce	<i>Picea glauca</i>	

Use the label rate of **Arsenal** per acre applied as a broadcast foliar spray for long-term control of labeled woody plants and residual control of herbaceous weeds. Within 4 to 6 weeks of treatment, grass and other herbaceous weeds will be controlled and may provide fuel to facilitate a site preparation burn, if desired, to control conifers or other species tolerant to the herbicide.

Apply the label rate of **Arsenal** per acre in 5 to 30 gallons total spray solution for helicopter applications or 5 to 100 gallons total spray solution for mechanical ground spray and backpack applications. Use a minimum of 0.5% by volume nonionic surfactant (NIS). Use the higher label rates of **Arsenal** and higher spray volumes when



controlling particularly dense or multilayered canopies of hardwood stands or difficult-to-control species.

In certain cases, tank mixes may be necessary for chemical control of conifers and other species tolerant to **Arsenal<sup>®</sup> herbicide**. Observe all precautions and restrictions on the product labels. Always follow the most restrictive label. Combinations with other products labeled for forest site preparation may kill certain plants such as legumes and blackberry, which are desirable for wildlife habitat.

Where quick initial brownout (deadening of foliage) is desired for burning, apply a tank mixture of 32 fl ozs to 64 fl ozs **Arsenal** with 16 fl ozs to 64 fl ozs glyphosate or 16 fl ozs to 48 fl ozs triclopyr ester per acre. For control of seedling pines, apply 32 fl ozs to 64 fl ozs **Arsenal** with 3 to 4 quarts glyphosate. For site preparation, rates less than 48 fl ozs **Arsenal** will provide suppression of hardwood brush and trees; some resprouting may occur.

**DO NOT** plant seedlings of black spruce (*Picea mariana*) or white spruce (*Picea glauca*) on sites broadcast-treated with **Arsenal** or into the treated zone of spot or banded applications for 3 months following application or injury may occur.

### Herbaceous Weed Control

Use **Arsenal** for selective weeding in the following conifers:

Common Name	Scientific Name	Rate (fl ozs/A)
Loblolly pine	<i>Pinus taeda</i>	12 to 20
Loblolly X pitch hybrid		
Virginia pine	<i>Pinus virginiana</i>	8 to 12
Longleaf pine <sup>1</sup>	<i>Pinus palustris</i>	
Slash pine <sup>1</sup>	<i>Pinus elliotii</i>	
Douglas fir <sup>1</sup>	<i>Pseudotsuga menziesii</i>	

<sup>1</sup>Use of surfactant is not recommended.

**Arsenal** may be applied as a broadcast treatment, banded over tree rows, or as a directed spray for release of young conifers from herbaceous weeds. To prevent possibility of conifer injury, **DO NOT** apply **Arsenal** when conifers are under stress from drought, disease, animal or winter injury, planting shock, or other stresses reducing conifer vigor. Broadcast applications may be made by helicopter, ground, or backpack sprayer. For difficult-to-control weeds, use the higher labeled rates. Where herbaceous weeds have overtopped conifer seedlings, a nonionic surfactant may be added to improve weed control (except for slash pine, long-leaf pine, and Douglas fir), at a rate not to exceed 0.5% of spray solution volume. Some minor conifer growth inhibition may be observed when herbaceous weed control treatments are made during periods of active conifer growth.

**Arsenal** may also be applied using backpack or handheld sprayers to control herbaceous weeds around individual conifer seedlings. Mix 0.8 fl oz to 1.2 fl ozs **Arsenal** and 0.2 oz nonionic surfactant per gallon of water. Direct the spray to the weeds and minimize the amount applied to

conifer foliage for best conifer tolerance. Ensure that maximum labeled rates per acre for previously listed crop species are not exceeded.

**Arsenal** may be tank mixed with sulfometuron to broaden the spectrum of weeds controlled. For loblolly pine, apply 8 fl ozs to 12 fl ozs **Arsenal** plus 1 oz to 2 ozs sulfometuron per acre. The application of **Arsenal** plus sulfometuron on other conifer species may cause growth suppression.

### Conifer Release Treatment

**Arsenal** may be applied as a broadcast or directed spray application for suppression of labeled brush, tree, and herbaceous weed species. Directed spray applications may be made with low-volume applications in conifer stands of all ages by targeting the unwanted vegetation and avoiding direct application to the conifer. Ensure that maximum labeled rates per acre listed for the following crop species are not exceeded.

#### Broadcast Applications

for release of the following conifers from hardwood competition:

Common Name	Scientific Name	Rate (fl ozs/A)
Loblolly pine <sup>1</sup>	<i>Pinus taeda</i>	24 to 40
Loblolly X pitch hybrid <sup>1</sup>		
Virginia pine <sup>1</sup>	<i>Pinus virginiana</i>	24 to 32
Longleaf pine	<i>Pinus palustris</i>	
Pitch pine	<i>Pinus rigida</i>	
Shortleaf pine	<i>Pinus echinata</i>	
Slash pine	<i>Pinus elliotii</i>	16 to 32
White pine <sup>1</sup>	<i>Pinus strobus</i>	
California red fir	<i>Abies magnifica</i>	16 to 24
California white fir	<i>Abies concolor</i>	
Lodgepole pine <sup>2</sup>	<i>Pinus contorta</i>	
Douglas fir <sup>2</sup>	<i>Pseudotsuga menziesii</i>	12 to 24
Jack pine <sup>2</sup>	<i>Pinus banksiana</i>	
Black spruce <sup>2</sup>	<i>Picea mariana</i>	
Red spruce <sup>2</sup>	<i>Picea rubens</i>	
White spruce <sup>2</sup>	<i>Picea glauca</i>	

<sup>1</sup> **DO NOT** make applications to white pine stands younger than three years old. To minimize potential white pine injury, release treatments should not be made prior to July 15.

<sup>2</sup> Applications should be made after formation of final conifer resting buds in the fall or height growth inhibition may occur.

<sup>3</sup> **Mid-rotation release:** For broadcast applications below the pine canopy in established stands of loblolly pine, loblolly X pitch hybrid, and Virginia pine, use 32 fl ozs to 64 fl ozs product per acre. For mid rotation release of other species, use rates listed in chart above.

**For slash pine and longleaf pine, broadcast release treatments over the top of pines for the purpose of woody plant control must be made after August 15 and only in stands 2 through 5 years old. For applications over the top of slash pine and longleaf pine, DO NOT add surfactant and use lower labeled rates on sandy soils.**

Apply the label rate of **Arsenal® herbicide** per acre when making broadcast applications with helicopter or ground spray equipment. Refer to mixing and application instructions for proper spray volumes. A nonionic surfactant may be added at no more than 0.25% by volume.

Use the higher label rates of **Arsenal** when controlling particularly dense stands or difficult-to-control species.

Some minor conifer growth inhibition may be observed when release treatments are made during periods of active conifer growth. To minimize potential conifer height growth inhibition, **DO NOT** make broadcast applications to conifer stands except loblolly pine before the end of the second growing season. To minimize potential conifer height growth inhibition, broadcast release treatments may be made late in the growing season. To prevent possibility of conifer injury, **DO NOT** apply **Arsenal** when conifers are under stress from drought, disease, animal or winter injury, or other stresses reducing conifer vigor.

**Arsenal** may be used to release loblolly pine seedlings during the first growing season following planting or for one-year-old natural loblolly pine regeneration. For one-year-old loblolly pine release, apply 24 fl ozs to 40 fl ozs per acre of **Arsenal** after July 15. Rates below 32 fl ozs per acre are intended for hardwood growth suppression; expect hardwood resprouting.

### Spot Treatment of Undesirable Hardwood Vegetation

**Arsenal** may be used as a directed foliar or cut-stem application to control undesirable brush and hardwoods in the management of stands of all ages for the conifer species listed in the broadcast application section above. Refer to mixing and application instructions in the directed foliar or cut-stem sections above for proper use rates, equipment, and application techniques. **DO NOT** exceed maximum labeled rates per acre listed for crop species. Cut-stem applications may be used for spot treatment of undesirable hardwoods in Ponderosa pine stands using 24 fl ozs or less of **Arsenal** per acre.

Avoid direct application to desired plant species or injury may occur. Injury may occur to nontarget or desirable hardwoods or conifers if they extend from the same root system, or their root systems are grafted to those of the treated tree, or their roots extend into the treated zone.

### Late Rotation Vegetation Control in Western Conifer

In California, the Pacific Northwest and Inland Northwest, broadcast aerial applications of **Arsenal** up to 48 fl ozs per acre are permissible in conifer stands that are targeted for harvesting the year following treatment. Use minimum spray volume of 15 gallons per acre. Significant conifer injury or mortality must be expected. **DO NOT** use this treatment if conifer injury or mortality cannot be tolerated.

### Bag and Spray Application for Conifer Release

In Douglas fir and Ponderosa pine stands, broadcast applications of **Arsenal** up to 32 fl ozs per acre are permissible when the trees are covered by bags prior to the application. The bags must prevent the spray mix from contacting the conifer foliage. On sites with coarse textured soils (e.g. decomposed granite, pumice, sandy or rocky sites) or low levels of soil organic matter (generally 5% or less), significant conifer growth inhibition and mortality is possible. **DO NOT** use this treatment on these types of sites if conifer growth inhibition and mortality cannot be tolerated.

### Nonagricultural Land Use

**Arsenal** may be used for woody and herbaceous weed control in nonagricultural lands including private, public and military lands as follows: uncultivated nonagricultural areas (including airports, highway, railroad and utility rights-of-way, and sewage disposal areas); uncultivated agricultural areas - noncrop producing (including farmyards, fuel storage areas, fence rows, nonirrigation ditchbanks, and barrier strips); industrial sites - outdoor (including lumberyards, pipeline and tank farms); and natural areas (including wildlife management areas, wildlife openings, wildlife habitats, recreation areas, campgrounds, trailheads, and trails).

Applications to nonagricultural lands are not applicable to treatment of commercial timber or other plants grown for sale or other commercial use, or for commercial seed production, or for research purposes.

### Brush Control

Use the specified rate of **Arsenal** with the preferred application technique for control of undesirable brush.

### Tank Mixes and Application Rates for Low-volume Foliar Brush Control\*

Target Vegetation	Arsenal Rate (% by volume)	Tank Mix
Mixed hardwoods without elm, locust, or pine	1.0 to 1.5	Surfactant
Mixed hardwoods containing elm, locust, and pine	0.5 to 1.0	<b>Accord®</b> at 2% to 3% by volume plus surfactant
Mixed hardwoods with locust and pine but no elm		<b>Krenite®</b> at 2% to 5% by volume plus surfactant
Mixed hardwoods with locust and elm but no pine		<b>Escort®</b> at 2 ozs/A or 2.3 grams/gal plus surfactant

\* Tank mixes with 2,4-D or products containing 2,4-D have resulted in reduced **Arsenal** efficacy.

## Backpack and Handheld Spray Mixing Guide

% solution	Product per gallon of mix (fl ozs)	Product per 4-gallon backpack (fl ozs)
0.25	0.3	1.3
0.5	0.6	2.6
1.0	1.3	5.1
2.0	2.6	10.2
3.0	3.8	15.4
5.0	6.4	25.6

### Measuring Chart

128 fluid ounces	=	1 gallon
16 fluid ounces	=	1 pint
8 pints	=	1 gallon
4 quarts	=	1 gallon
2 pints	=	1 quart

## Selective Control of Undesirable Weeds in Unimproved Bermudagrass and Bahiagrass

**Arsenal® herbicide** may be used on unimproved Bermudagrass and Bahiagrass turf such as roadsides, utility rights-of-way, and other nonagricultural lands. **Arsenal** application on established common and coastal Bermudagrass and Bahiagrass provides control of labeled broadleaf and grass weeds. Competition from these weeds is eliminated, releasing the Bermudagrass and Bahiagrass. Treatment of Bermudagrass with **Arsenal** results in a compacted growth habit and seedhead inhibition.

Uniformly apply with properly calibrated ground equipment using at least 10 gallons of water per acre.

Temporary yellowing of grass may occur when treatment is made after growth begins.

- **DO NOT** add surfactant in excess of the specified rate (1 fl oz per 25 gallons of spray solution).
- **DO NOT APPLY** to grass during its first growing season.
- **DO NOT APPLY** to grass under stress from drought, disease, insects, or other causes.

### Dosage Rate and Timing

**Bermudagrass.** Apply **Arsenal** at 6 fl ozs to 12 fl ozs per acre when Bermudagrass is dormant. Apply **Arsenal** at 6 fl ozs to 8 fl ozs per acre after Bermudagrass has reached full greenup. Applications made during greenup will delay greenup. Include a surfactant in the spray solution.

For additional preemergence control of annual grass and small-seeded broadleaf weeds, add **Pendulum® AquaCap™ herbicide** at the rate of 3.1 to 6.3 pints per acre. Consult the **Pendulum AquaCap** label for weeds controlled and for other use directions and precautions.

For control of Johnsongrass in Bermudagrass turf, apply **Arsenal** at 8 fl ozs per acre, plus **Roundup® herbicide** at 12 fl ozs per acre, plus surfactant. For additional control of broadleaves and vines, **Garlon® 3A herbicide** may be added to the above mix at 1 to 2 pints per acre. Observe all precautions and restrictions on the **Garlon 3A** and **Roundup** labels.

**Bahiagrass.** Apply **Arsenal** at 4 fl ozs to 8 fl ozs per acre when Bahiagrass is dormant or after grass has initiated greenup but has not exceeded 25% greenup. Include a surfactant in the spray solution; see **Adjuvants** section for specific use directions for surfactants.

### Weeds Controlled in Unimproved Bermudagrass and Bahiagrass

Common Name	Scientific Name
Bedstraw*	<i>Galium</i> spp.
Bishopweed*	<i>Ptilimnium capillaceum</i>
Buttercup*	<i>Ranunculus parviflorus</i>
Carolina geranium	<i>Geranium carolinianum</i>
Fescue	<i>Festuca</i> spp.
Foxtail	<i>Setaria</i> spp.
Little barley	<i>Hordeum pusillum</i>
Seedling Johnsongrass	<i>Sorghum halepense</i>
White clover	<i>Trifolium repens</i>
Wild carrot	<i>Daucus carota</i>
Yellow woodsorrel	<i>Oxalis stricta</i>

\* Use not permitted in California unless otherwise directed by supplemental labeling.

### Grass Growth and Seedhead Suppression

**Arsenal** may be used to suppress growth and seedhead development of certain turfgrass in unimproved areas. When **Arsenal** is applied to desirable turf, it may result in temporary turf damage and/or discoloration. Effects to the desirable turf may vary with environmental conditions. For optimum performance, apply before culm elongation. Applications may be made before or after mowing. If applied before mowing, allow at least 3 days of active growth before mowing. If applied after mowing, allow sufficient time for grass to recover before applying this product or injury may be amplified.

**DO NOT APPLY** to turf under stress (drought, cold, insect damage, etc.) or severe injury or death may occur.

**Bermudagrass.** Apply **Arsenal** at 6 fl ozs to 8 fl ozs per acre from early greenup to before seedhead initiation. **DO NOT** add surfactant for this application.

**Cool-season Unimproved Turf.** Apply **Arsenal** at 2 fl ozs per acre plus 0.25% nonionic surfactant. For increased suppression, **Arsenal** may be tank mixed with products such as **Embark® growth regulator** (8 fl ozs per acre). Tank mixes may increase injury to desired turf. Consult each product label for labeled turf species and other use directions and precautions. Tank mixes with 2,4-D or products containing 2,4-D may decrease the effectiveness of **Arsenal**.

## Total Vegetation Control where Bare Ground is Desired

**Arsenal**<sup>®</sup> herbicide is an effective herbicide for pre-emergence or postemergence control of many annual and perennial broadleaf and grass weeds where bare ground is desired. **Arsenal** is particularly effective on hard-to-control perennial grasses. **Arsenal** at 1.5 to 6 pints per acre can be used alone or in tank mix with herbicides approved for use in bare ground. The degree and duration of control are dependent on **Arsenal** rate used, tank mix partner, volume of carrier, soil texture, rainfall, and other conditions.

Consult manufacturer's labels for specific rates and weeds controlled. Always follow the more restrictive label restrictions and precautions for all products used when making an application involving tank mixes.

Applications of **Arsenal** may be made any time of the year. Use equipment calibrated to deliver desired gallons per acre spray volume and uniformly distribute the spray pattern over the treated area.

**Postemergence Application.** Always use a spray adjuvant (see **Adjuvants** section of this label) when making a postemergence application. For optimum performance on tough-to-control annual grass weeds, apply **Arsenal** at a total volume of 100 gallons per acre or less. For quicker burndown or brownout of target weeds, **Arsenal** may be tank mixed with **Roundup**<sup>®</sup> herbicide. Tank mixes with 2,4-D or products containing 2,4-D may reduce the performance of **Arsenal**. Always follow the most restrictive label restrictions and precautions for all products used when tank mixing.

**Spot Treatment.** **Arsenal** may be used as a follow-up treatment to control escapes or weed encroachment in a bareground situation. To prepare the spray solution, thoroughly mix in each gallon of water 0.5% to 5% **Arsenal** plus an adjuvant. For increased burndown, include **Roundup** as a tank mixture. For added residual weed control or to increase the weed spectrum, add **Pendulum**<sup>®</sup> **AquaCap**<sup>™</sup> herbicide, **Overdrive**<sup>®</sup> herbicide, or diuron. Always follow the most restrictive label restrictions and precautions for all products used when tank mixing.

## Control of Undesirable Weeds under Paved Surfaces

**Arsenal** can be used under asphalt, pond liners, and other paved areas, **ONLY** in industrial sites or where the pavement has a suitable barrier along the perimeter that prevents encroachment of roots of desirable plants.

Use **Arsenal** only where the area to be treated has been prepared according to good construction practices. If rhizomes, stolons, tubers, or other vegetative plant parts are present in the site, remove them by scalping with a grader blade to a depth sufficient to ensure their complete removal.

Follow **Arsenal** applications with paving as soon as possible. **DO NOT** apply where **Arsenal** may contact the roots of desirable trees or other plants.

**Arsenal** is not to be used under pavement on residential properties, such as driveways or parking lots, or for use in recreational areas, such as under bike or jogging paths, golf cart paths, or tennis courts, or where landscape plantings could be anticipated.

Injury or death of desirable plants may result if **Arsenal** is applied where roots are present or where roots may extend into the treated area. Roots of trees and shrubs may extend a considerable distance beyond the branch extremities (drip line).

Apply to the soil surface only when final grade is established. **DO NOT** move soil following **Arsenal** application.

Apply **Arsenal** in sufficient water (at least 100 gals per acre) to ensure thorough and uniform wetting of the soil surface, including shoulder areas. Add **Arsenal** at a rate of 3 quarts per acre (2.2 fluid ounces per 1000 square feet) to clean water in the spray tank during filling operation. Agitate before spraying.

If soil is not moist before treatment, incorporation of **Arsenal** is needed for herbicide activation. Incorporate **Arsenal** into the soil to a depth of 4 to 6 inches using a rototiller or disc. Rainfall or irrigation of 1 inch will also provide uniform incorporation. **DO NOT** allow treated soil to wash or move into untreated areas.

## Spot Treatment and Crack-and-crevice Treatment

Use **Arsenal** as an initial or follow-up treatment to control weed escapes or weed encroachment in a bareground situation, including cracks and crevices in paved surfaces such as roadways, runways, and parking areas.

## Grass Pasture and Rangeland Spot Treatment Weed Control

For control of undesirable vegetation in grass pasture and rangeland, **Arsenal** may be applied as a spot treatment at a rate of 2 to 48 fluid ounces of product per treated acre using any of the described ground application methods. Spot applications to grass pasture and rangeland may not exceed more than 1/10 of the area to be grazed or cut for hay. See appropriate sections of this label for specific use directions for the application method and vegetation control desired. **DO NOT** apply more than 48 fluid ounces of **Arsenal** per acre per year.

## Grazing and Haying Restrictions

- There are no grazing restrictions following **Arsenal** application.
- **DO NOT** cut forage grass for hay for 7 days after **Arsenal** application.



## Rangeland Use Instructions

**Arsenal® herbicide** may be applied to rangeland for control of undesirable vegetation to achieve one or more of the following vegetation management objectives:

- Control of undesirable (nonnative, invasive, and noxious) plant species
- Control of undesirable vegetation to aid in the establishment of desirable rangeland plant species
- Control of undesirable vegetation to aid in the establishment of desirable rangeland vegetation following a fire
- Control of undesirable vegetation to reduce wildfire fuel
- Release of existing desirable rangeland plant communities from the competitive pressure of undesirable plant species
- Control of undesirable vegetation for wildlife habitat improvement

To ensure the protection of threatened and endangered plants when applying **Arsenal** to rangeland:

- Federal agencies must follow NEPA regulations to ensure protection of threatened and endangered plants.
- State agencies must work with the Fish and Wildlife Service or the Service's designated state conservation agency to ensure protection of threatened and endangered plants.
- Other organizations or individuals must operate under a habitat conservation plan if threatened or endangered plants are known to be present on the land to be treated.

See the appropriate section(s) of this label for specific use directions for the desired rangeland vegetation management objective.

**Arsenal** must only be applied to a given rangeland acre as specific weed problems arise. Long-term control of undesirable weed species ultimately depends on the successful use of land management practices that promote the growth and sustainability of desirable rangeland plant species.

## Rotational Crop Instructions

Rotational crops may be planted 12 months after applying **Arsenal** at the specified pasture and rangeland rate. Following 12 months after an **Arsenal** application and before planting any crop, a successful field bioassay must be completed. The field bioassay consists of a test strip of the intended rotational crop planted in the previously treated area in the grass pasture/rangeland and grown to maturity. The test strip should include low areas and knolls and include variations in soil type and pH within the treated area. If no crop injury is evident in the test strip, the intended rotational crop may be planted the following year.

Use of **Arsenal** in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.

## Aquatic Weed Control

**Arsenal** may be applied for control of floating and emergent undesirable vegetation (see **Aquatic Weeds Controlled** and **Terrestrial Weeds Controlled**) in or near bodies of water that may be flowing, nonflowing, or transient. **Arsenal** may be applied to aquatic sites that include lakes, rivers, streams, ponds, seeps, drainage ditches, canals, reservoirs, swamps, bogs, marshes, estuaries, bays, brackish water, transitional areas between terrestrial and aquatic sites, riparian sites, and seasonal wet areas. See **Product Use and Restrictions** section of this label for restrictions and instructions on aquatic uses.

Read and observe the following directions if aquatic sites are present in nonagricultural lands and are part of the intended treatment area.

**Arsenal** must be applied to the emergent foliage of the target vegetation and has little-to-no activity on submerged aquatic vegetation. **Arsenal** concentrations resulting from direct application to water are not expected to be of sufficient concentration or duration to control target vegetation. Apply **Arsenal** to maximize spray interception by target vegetation while minimizing the amount of overspray that enters the water.

**Arsenal** does not control plants that are completely submerged or have a majority of their foliage under water.

**Arsenal** may be applied with surface or helicopter application equipment in a minimum of 2 gallons of water per acre. When applying by helicopter, follow directions under the **Aerial Application** section of this label; otherwise, refer to the **Ground Application** section when using surface equipment.

Applications to moving bodies of water should be made while traveling upstream to prevent concentration of this herbicide in water. **DO NOT** apply to bodies of water or portions of bodies of water where emergent and/or floating weeds do not exist.

When applying to target vegetation that covers a large percentage of the surface area of impounded water, treating the area in strips may avoid oxygen depletion because of decaying vegetation. Oxygen depletion may result in the suffocation of some sensitive aquatic organisms. If oxygen depletion is a concern, treat no more than 1/2 of the surface area of the water in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outward in bands to allow aquatic organisms to move into untreated areas.

Avoid washoff of sprayed foliage by spray boat or recreational boat backwash for 1 hour after application.

Apply **Arsenal** at 1 to 3 quarts per acre depending on species present and weed density. **DO NOT** exceed the maximum label rate of 3 quarts per acre (1.5 lbs ae/A) per year. Use the higher labeled rates for heavy weed pressure. Consult **Aquatic Weeds Controlled** and **Terrestrial Weeds Controlled** for specific rates.

**Arsenal® herbicide** may be applied as a draw-down treatment in areas described above. Apply **Arsenal** to weeds after water has been drained and allow 14 days before reintroduction of water.

## Weeds Controlled

### Aquatic Weeds Controlled

**Arsenal® herbicide** will control the following target species as specified in the **Use Rates and Application Directions** column of the table. Rates are expressed in terms of product volume for broadcast applications and as a % solution for directed applications including spot treatments. **For % solution applications, DO NOT apply more than the equivalent of 3 quarts of Arsenal per acre.**

Common Name	Scientific Name	Use Rates and Application Directions
<b>Floating Weeds</b>		
*Floating heart	<i>Nymphodes</i> spp.	2 to 4 pints/A (0.5 to 1.0% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Frogbit	<i>Limnobium spongia</i>	1 to 2 pints/A (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Spatterdock	<i>Nuphar luteum</i>	Apply a tank mix of: 2 to 4 pints/A <b>Arsenal</b> + 4 to 6 pints/A glyphosate (0.5% <b>Arsenal</b> + 1.5% glyphosate) in 100 GPA water for best control. Ensure 100% coverage of actively growing emergent foliage.
*Water hyacinth	<i>Eichhornia crassipes</i>	1 to 2 pints/A (0.5% solution) applied in 100 GPA water to actively growing foliage.
*Water lettuce	<i>Pistia stratiotes</i>	1 to 2 pints/A (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
<b>Emergent Weeds</b>		
*Alligatorweed	<i>Alternanthera philoxeroides</i>	1 to 4 pints/A (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Arrowhead, duck-potato	<i>Sagittaria</i> spp.	1 to 2 pints/A (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Bacopa, lemon	<i>Bacopa</i> spp.	1 to 2 pints/A (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Parrot feather	<i>Myriophyllum aquaticum</i>	Foliage must be above water for sufficient <b>Arsenal</b> uptake. Apply 2 to 4 pints/A <b>Arsenal</b> to actively growing emergent foliage.
*Pennywort	<i>Hydrocotyle</i> spp.	1 to 2 pints/A (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Pickerelweed	<i>Pontederia cordata</i>	2 to 3 pints/A (1% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Taro, wild Coco yam Dashoen Elephant's ear	<i>Colocasia esculentum</i>	4 to 6 pints/A (1.5% solution) applied in 100 GPA with a high quality sticker adjuvant. Ensure good coverage of actively growing emergent foliage.

\* Use not permitted in California unless otherwise directed by supplemental labeling.

(continued)

**Aquatic Weeds Controlled** *(continued)*

Common Name	Scientific Name	Use Rates and Application Directions
<b>Emerged Weeds</b> <i>(continued)</i>		
*Water chestnut	<i>Trapa natans</i>	4 to 6 pints/A (1.5% solution) applied in 100 GPA with a high quality sticker adjuvant. Ensure good coverage of actively growing emergent foliage.
*Water lily	<i>Nymphaea odorata</i>	2 to 3 pints/A (1% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Water primrose	<i>Ludwigia uruguayensis</i>	4 to 6 pints/A (1.5% solution). Ensure 100% coverage of actively growing emergent foliage.
<b>Terrestrial/Marginal Weeds</b>		
*Aquatic nightshade Soda apple	<i>Solanum tampicense</i>	2 pints/A applied to foliage
*Bamboo, Japanese	<i>Phyllostachys</i> spp.	3 to 4 pints/A applied to foliage when plant is actively growing; before setting seedhead. More foliage will result in greater herbicide uptake, resulting in greater root kill.
Beach, vitex	<i>Vitex rotundifolia</i>	5% solution + 1% MSO foliar spray 17% solution stem injection (hack and squirt)
Brazilian pepper Christmasberry	<i>Schinus terebinthifolius</i>	2 to 4 pints/A applied to foliage
Cattail	<i>Typha</i> spp.	2 to 4 pints/A (1% solution) applied to actively growing green foliage after full leaf elongation. Lower rates will control cattail in the North; higher rates are needed in the South.
Chinese tallow tree	<i>Sapium sebiferum</i>	16 to 24 fl ozs/A applied to foliage
Cogongrass	<i>Imperata cylindrica</i>	Burn foliage, till area; then fall-spray 2 quarts/A <b>Arsenal® herbicide</b> + MSO applied to new growth.
Cordgrass, prairie	<i>Spartina</i> spp.	4 to 6 pints/A applied to actively growing foliage
*Cutgrass	<i>Zizaniopsis miliacea</i>	4 to 6 pints/A applied to actively growing foliage
*Elephant grass Napier grass	<i>Pennisetum purpureum</i>	3 pints/A applied to actively growing foliage
*Flowering rush	<i>Butomus umbellatus</i> L.	2 to 3 pints/A applied to actively growing foliage
Giant reed Wild cane	<i>Arundo donax</i>	4 to 6 pints/A applied in spring to actively growing foliage
*Golden bamboo	<i>Phyllostachys aurea</i>	3 to 4 pints/A applied to foliage when plant is actively growing; before setting seedhead. More foliage will result in greater herbicide uptake, resulting in greater root kill.
Junglerice	<i>Echinochloa colonum</i>	3 to 4 pints/A applied to actively growing foliage
Knapweed	<i>Centaurea</i> spp.	<b>Russian knapweed:</b> 2 to 3 pints/A + 1 quart/A MSO fall-applied after senescence begins
Knotweed, Japanese	<i>Polygonum cuspidatum</i> <i>Fallopia japonica</i>	3 to 4 pints/A applied postemergence to actively growing foliage

\* Use not permitted in California unless otherwise directed by supplemental labeling.

*(continued)*



## Aquatic Weeds Controlled *(continued)*

Common Name	Scientific Name	Use Rates and Application Directions
<b>Terrestrial/Marginal Weeds <i>(continued)</i></b>		
Melaleuca Paperbark tree	<i>Melaleuca quinquenervia</i>	<ul style="list-style-type: none"> <li>• <b>Established stands</b> - Apply 6 pints/A <b>Arsenal</b><sup>®</sup> herbicide + 6 pints/A glyphosate + spray adjuvant. For best results, use 4 quarts/A MSO as an adjuvant.</li> <li>• <b>Ground foliar application</b> - Uniformly apply to ensure 100% coverage.</li> <li>• <b>Broadcast foliar control</b> - Apply aerially in a minimum of 2 passes at 10 gallons/A applied cross treatment.</li> <li>• <b>Spot treatment</b> - Use a 25% <b>Arsenal</b> + 25% solution of glyphosate + 1.25% MSO in water applied as a drill or stump treatment.</li> </ul>
*Nutgrass Kilip'opu	<i>Cyperus rotundus</i>	2 pints/A <b>Arsenal</b> + 1 quart/A MSO applied early postemergence
*Nutsedge	<i>Cyperus</i> spp.	2 to 3 pints/A postemergence to foliage or preemergence incorporated; nonincorporated preemergence applications will not control.
Phragmites Common reed	<i>Phragmites australis</i>	4 to 6 pints/A applied to actively growing green foliage after full leaf elongation. Ensure 100% coverage. If stand has a substantial amount of old stem tissue, mow or burn; allow to regrow to approximately 5 feet tall before treatment. Lower rates will control phragmites in the North; higher rates are needed in the South.
*Poison hemlock	<i>Conium maculatum</i>	2 pints/A <b>Arsenal</b> + 1 quart/A MSO applied preemergence to early postemergence to rosette before flowering
Purple loosestrife	<i>Lythrum salicaria</i>	1 pint/A applied to actively growing foliage
Reed canarygrass	<i>Phalaris arundinacea</i>	3 to 4 pints/A applied to actively growing foliage
Rose, swamp	<i>Rosa palustris</i>	2 to 3 pints/A applied to actively growing foliage
Russian olive	<i>Elaeagnus angustifolia</i>	2 to 4 pints/A (1% solution) applied to foliage
Saltcedar Tamarisk	<i>Tamarix</i> spp.	<b>Aerial application</b> - 2 quarts <b>Arsenal</b> + 0.25% v/v NIS applied to actively growing foliage during flowering. <b>Spot treatment</b> - Use 1% solution of <b>Arsenal</b> + 0.25% v/v NIS and spray to wet foliage. After application, wait at least 2 years before disturbing treated saltcedar. Earlier disturbance can reduce overall control.
Smartweed	<i>Polygonum</i> spp.	2 pints/A applied early postemergence
Sumac	<i>Rhus</i> spp.	2 to 3 pints/A applied to foliage
Swamp morningglory Kangkong Water spinach	<i>Ipomoea aquatica</i>	1 to 2 pints/A <b>Arsenal</b> + 1 quart/A MSO applied early postemergence
Torpedo grass	<i>Panicum repens</i>	4 pints/A (1.0 to 1.5% solution). Ensure good coverage to actively growing foliage.
*White top Hoary cress	<i>Cardaria draba</i>	1 to 2 pints/A applied in spring to foliage during flowering
Willow	<i>Salix</i> spp.	2 to 3 pints/A <b>Arsenal</b> applied to actively growing foliage. Ensure good coverage.

\* Use not permitted in California unless otherwise directed by supplemental labeling.

## Terrestrial Weed Control

In terrestrial sites, **Arsenal**® herbicide will provide pre-emergence or postemergence control with residual control of the following target vegetation species at the rates listed. Residual control refers to control of newly germinating seedlings in both annuals and perennials. In general, annual weeds may be controlled by preemergence or postemergence applications of **Arsenal**. For established biennials and perennials, postemergence applications of **Arsenal** will provide the best control.

The rates shown below refer to broadcast applications and indicate the relative sensitivity of these weeds. The relative sensitivity should be referenced when preparing low-volume spray solutions (see **Low-volume Foliar Application** section of **Ground Application**); low-volume applications may provide control of the target species with less **Arsenal** per acre than is shown for the broadcast treatments. Use **Arsenal** only in accordance with the specific use directions on this label and the leaflet label.

Use the relative sensitivity of the species listed following to determine the relative risk of nontarget plant injury if any of the species listed following are considered to be desirable within the area to be treated.

**Resistant Biotypes.** Naturally occurring biotypes (a plant within a given species that has a slightly different but distinct genetic makeup from other plants of the same species) of some weeds listed on this label may not be effectively controlled. If naturally occurring resistant biotypes are present in an area, tank mix **Arsenal** or apply sequentially with an appropriate registered herbicide having a different mode of action to ensure control.

### Terrestrial Weeds Controlled

Common Name	Scientific Name	Growth Habit <sup>2</sup>
<b>Grass Weeds</b>		
<b>Apply 2 to 3 pts/A<sup>1</sup></b>		
Annual bluegrass	<i>Poa annua</i>	A
Broadleaf signalgrass	<i>Bracharia platyphylla</i>	A
Canada bluegrass	<i>Poa compressa</i>	P
Downy brome	<i>Bromus tectorum</i>	A
Fescue	<i>Festuca</i> spp.	A/P
Foxtail	<i>Setaria</i> spp.	A
Italian ryegrass	<i>Lolium multiflorum</i>	A
Johnsongrass <sup>3</sup>	<i>Sorghum halepense</i>	P
Kentucky bluegrass	<i>Poa pratensis</i>	P
Napier grass <sup>4</sup>	<i>Pennisetum purpureum</i>	P
Orchardgrass	<i>Dactylis glomerata</i>	P
Paragrass	<i>Bracharia mutica</i>	P
Quackgrass	<i>Agropyron repens</i>	P

(continued)

### Terrestrial Weeds Controlled (continued)

Common Name	Scientific Name	Growth Habit <sup>2</sup>
<b>Grass Weeds (continued)</b>		
<b>Apply 2 to 3 pts/A<sup>1</sup> (continued)</b>		
Sandbur	<i>Cenchrus</i> spp.	A
Smooth brome	<i>Bromus inermis</i>	P
Vasaygrass	<i>Paspalum urvillei</i>	P
Wild oats	<i>Avena fatua</i>	A
Witchgrass	<i>Panicum capillare</i>	A
<b>Apply 3 to 4 pts/A<sup>1</sup></b>		
Barnyardgrass	<i>Echinochloa crus-galli</i>	A
Beardgrass	<i>Andropogon</i> spp.	P
Bluegrass, annual	<i>Poa annua</i>	A
Bulrush <sup>5</sup>	<i>Scirpus validus</i>	P
Cheat	<i>Bromus secalinus</i>	A
Cogongrass	<i>Imperata cylindrica</i>	P
Crabgrass	<i>Digitaria</i> spp.	A
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	A
Fall panicum	<i>Panicum dichotomiflorum</i>	A
Goosegrass	<i>Eleusine indica</i>	A
Itchgrass	<i>Rottboellia exaltata</i>	A
Lovegrass <sup>4</sup>	<i>Eragrostis</i> spp.	P
Maidencane <sup>5</sup>	<i>Panicum hemitomon</i>	A
Panicum, browntop	<i>Panicum fasciculatum</i>	A
Panicum, Texas	<i>Panicum texanum</i>	A
Prairie threeawn	<i>Aristida oligantha</i>	P
Sandbur, field	<i>Cenchrus incertus</i>	A
Signalgrass	<i>Bracharia platyphylla</i>	A
Wild barley	<i>Hordeum</i> spp.	A
Woolly cupgrass	<i>Eriochloa villosa</i>	A
<b>Apply 4 to 6 pts/A<sup>1</sup></b>		
Bahiagrass	<i>Paspalum notatum</i>	P
Bermudagrass <sup>3,4</sup>	<i>Cynodon dactylon</i>	P
Big bluestem	<i>Andropogon gerardii</i>	P
Dallisgrass	<i>Paspalum dilatatum</i>	P
Feathertop	<i>Pennisetum villosum</i>	P
Guineagrass	<i>Panicum maximum</i>	P
Saltgrass <sup>3</sup>	<i>Distichlis stricta</i>	P
Sand dropseed	<i>Sporobolus cryptandrus</i>	P
Sprangletop	<i>Leptochloa</i> spp.	A
Timothy	<i>Phleum pratense</i>	P
Wirestem muhly	<i>Muhlenbergia frondosa</i>	P

<sup>1</sup> Use higher rate where heavy or well-established infestations occur.

<sup>2</sup> Growth Habit: A = Annual, B = Biennial, P = Perennial

<sup>3</sup> Use a minimum of 75 GPA.

<sup>4</sup> Use higher labeled rates.

<sup>5</sup> Use not permitted in California unless otherwise directed by supplemental labeling.

## Terrestrial Weeds Controlled *(continued)*

Common Name	Scientific Name	Growth Habit <sup>2</sup>
<b>Broadleaf Weeds</b>		
<b>Apply 2 to 3 pts/A<sup>1</sup></b>		
Burdock	<i>Arctium</i> spp.	B
Carolina geranium	<i>Geranium carolinianum</i>	A
Carpetweed	<i>Mollugo verticillata</i>	A
Clover	<i>Trifolium</i> spp.	A/P
Common chickweed	<i>Stellaria media</i>	A
Common ragweed	<i>Ambrosia artemisiifolia</i>	A
Dandelion	<i>Taraxacum officinale</i>	P
Dogfennel	<i>Eupatorium capillifolium</i>	A
Filaree	<i>Erodium</i> spp.	A
Fleabane	<i>Erigeron</i> spp.	A
Hoary vervain	<i>Verbena stricta</i>	P
Indian mustard	<i>Brassica juncea</i>	A
Kochia	<i>Kochia scoparia</i>	A
Lambsquarters	<i>Chenopodium album</i>	A
Lespedeza <sup>3</sup>	<i>Lespedeza</i> spp.	P
Miner's lettuce	<i>Montia perfoliata</i>	A
Mullein	<i>Verbascum</i> spp.	B
Nettleleaf goosefoot	<i>Chenopodium murale</i>	A
Oxeye daisy	<i>Chrysanthemum leucanthemum</i>	P
Pepperweed	<i>Lepidium</i> spp.	A
Pigweed	<i>Amaranthus</i> spp.	A
Puncturevine	<i>Tribulus terrestris</i>	A
Russian thistle	<i>Salsola kali</i>	A
Smartweed	<i>Polygonum</i> spp.	A/P
Sorrell	<i>Rumex</i> spp.	P
Sunflower	<i>Helianthus</i> spp.	A
Sweet clover	<i>Mellilotus</i> spp.	A/B
Tansymustard	<i>Descurainia pinnata</i>	A
Western ragweed	<i>Ambrosia psilostachya</i>	P
Wild carrot	<i>Daucus carota</i>	B
Wild lettuce	<i>Lactuca</i> spp.	A/B
Wild parsnip	<i>Pastinaca sativa</i>	B
Wild turnip	<i>Brassica campestris</i>	B
Woollyleaf bursage	<i>Franseria tomentosa</i>	P
Yellow woodsorrel	<i>Oxalis stricta</i>	P

*(continued)*

## Terrestrial Weeds Controlled *(continued)*

Common Name	Scientific Name	Growth Habit <sup>2</sup>
<b>Broadleaf Weeds <i>(continued)</i></b>		
<b>Apply 3 to 4 pts/A<sup>1</sup></b>		
Broom snakeweed <sup>4</sup>	<i>Gutierrezia sarothrae</i>	P
Bull thistle	<i>Cirsium vulgare</i>	B
Burclover	<i>Medicago</i> spp.	A
Chickweed, mouseear	<i>Cerastium vulgatum</i>	A
Clover, hop	<i>Trifolium procumbens</i>	A
Cocklebur	<i>Xanthium strumarium</i>	A
Cudweed	<i>Gnaphalium</i> spp.	A
Desert camelthorn	<i>Alhagi pseudalhagi</i>	P
Dock	<i>Rumex</i> spp.	P
Fiddleneck	<i>Amsinckia intermedia</i>	A
Goldenrod	<i>Solidago</i> spp.	P
Henbit	<i>Lamium amplexicaule</i>	A
Knotweed, prostrate	<i>Polygonum aviculare</i>	A/P
Pokeweed	<i>Phytolacca americana</i>	P
Purslane	<i>Portulaca</i> spp.	A
Pusley, Florida	<i>Richardia scabra</i>	A
Rocket, London	<i>Sisymbrium irio</i>	A
Rush skeletonweed <sup>1</sup>	<i>Chondrilla juncea</i>	B
Saltbush	<i>Atriplex</i> spp.	A
Shepherdspurse	<i>Capsella bursa-pastoris</i>	A
Spurge, annual	<i>Euphorbia</i> spp.	A
Stinging nettle <sup>1</sup>	<i>Urtica dioica</i>	P
Velvetleaf	<i>Abutilon theophrasti</i>	A
Yellow starthistle	<i>Centaurea solstitialis</i>	A
<b>Apply 4 to 6 pts/A<sup>1</sup></b>		
Arrowwood	<i>Pluchea sericea</i>	A
Canada thistle	<i>Cirsium arvense</i>	P
Giant ragweed	<i>Ambrosia trifida</i>	A
Gray rabbitbrush	<i>Chrysothamnus nauseosus</i>	P
Little mallow	<i>Malva parviflora</i>	B
Milkweed	<i>Asclepias</i> spp.	P
Primrose	<i>Oenothera kunthiana</i>	P
Silverleaf nightshade	<i>Solanum elaeagnifolium</i>	P
Sowthistle	<i>Sonchus</i> spp.	A
Texas thistle	<i>Cirsium texanum</i>	P

<sup>1</sup> Use higher rate where heavy or well-established infestations occur.

<sup>2</sup> Growth Habit: A = Annual, B = Biennial, P = Perennial

<sup>3</sup> Use not permitted in California unless otherwise directed by supplemental labeling.

<sup>4</sup> For best results, early postemergence applications are required.

## Terrestrial Weeds Controlled (continued)

Common Name	Scientific Name	Growth Habit <sup>2</sup>
<b>Vines and Brambles</b>		
<b>Apply 1 pt/A</b>		
Field bindweed	<i>Convolvulus arvensis</i>	P
Hedge bindweed	<i>Calystegia sepium</i>	A
<b>Apply 2 to 3 pts/A<sup>1</sup></b>		
Wild buckwheat	<i>Polygonum convolvulus</i>	P
<b>Apply 3 to 4 pts/A<sup>1</sup></b>		
Greenbriar	<i>Smilax</i> spp.	P
Honeysuckle <sup>3</sup>	<i>Lonicera</i> spp.	P
Morningglory	<i>Ipomoea</i> spp.	A/P
Polson ivy	<i>Rhus radicans</i>	P
Redvine	<i>Brunnichia cirrhosa</i>	P
Wild rose <sup>3</sup>	<i>Rosa</i> spp.	P
Including:		
Multiflora rose	<i>Rosa multiflora</i>	P
Macartney rose	<i>Rosa bracteata</i>	P

### Apply 4 to 6 pts/A<sup>1</sup>

Trumpet creeper	<i>Campsis radicans</i>	P
Virginia creeper	<i>Parthenocissus quinquefolia</i>	P
Wild grape	<i>Vitis</i> spp.	P

<sup>1</sup> Use higher rate where heavy or well-established infestations occur.

<sup>2</sup> Growth Habit: A = Annual, B = Biennial, P = Perennial

<sup>3</sup> Use higher labeled rates.

Common Name	Scientific Name	Growth Habit <sup>2</sup>
<b>Brush Species</b>		
<b>Apply 2 to 4 pts/A<sup>1</sup></b>		
Brazilian peppertree	<i>Schinus terebinthifolius</i>	P
Chinese tallow tree	<i>Sapium sebiferum</i>	P
Popcorn tree		
Russian olive	<i>Elaeagnus angustifolia</i>	P
Sumac	<i>Rhus</i> spp.	P
Willow	<i>Salix</i> spp.	P
<b>Apply 4 to 6 pts/A<sup>1</sup></b>		
Alder	<i>Alnus</i> spp.	P
American beech	<i>Fagus grandifolia</i>	P
Ash <sup>3</sup>	<i>Fraxinus</i> spp.	P
Aspen	<i>Populus</i> spp.	P
Autumn olive	<i>Elaeagnus umbellata</i>	P
Bald cypress	<i>Taxodium distichum</i>	P
Bigleaf maple	<i>Acer macrophyllum</i>	P
Birch <sup>3</sup>	<i>Betula</i> spp.	P
Black gum <sup>4</sup>	<i>Nyssa sylvatica</i>	P
Black oak	<i>Quercus kelloggii</i>	P
Boxelder	<i>Acer negundo</i>	P
Ceanothis	<i>Ceanothis</i> spp.	P
Cherry <sup>3,4</sup>	<i>Prunus</i> spp.	P

(continued)

## Terrestrial Weeds Controlled (continued)

Common Name	Scientific Name	Growth Habit <sup>2</sup>
<b>Brush Species (continued)</b>		
<b>Apply 4 to 6 pts/A<sup>1</sup></b>		
Chinaberry	<i>Melia azedarach</i>	P
Chinquapin	<i>Castanopsis chrysophylla</i>	P
Cottonwood	<i>Populus trichocarpa</i>	
	<i>P. deltoides</i>	P
Cypress	<i>Taxodium</i> spp.	P
Dogwood <sup>5</sup>	<i>Comus</i> spp.	P
Elm <sup>5</sup>	<i>Ulmus</i> spp.	P
Eucalyptus	<i>Eucalyptus</i> spp.	P
Hawthorn	<i>Crataegus</i> spp.	P
Hickory <sup>3</sup>	<i>Carya</i> spp.	P
Huckleberry	<i>Gaylussacia</i> spp.	P
Lyonia spp.		
including:		
Fetterbush	<i>Lyonia lucida</i>	
Staggerbush	<i>Lyonia mariana</i>	P
Madrone	<i>Arbutus menziesii</i>	P
Maple	<i>Acer</i> spp.	P
Melaleuca	<i>Melaleuca quinquenervia</i>	P
Mulberry <sup>3,6</sup>	<i>Morus</i> spp.	P
Oak <sup>7</sup>	<i>Quercus</i> spp.	P
Persimmon <sup>4</sup>	<i>Diospyros virginiana</i>	P
Poison oak	<i>Rhus diversiloba</i>	P
Poplar	<i>Populus</i> spp.	P
Privet	<i>Ligustrum vulgare</i>	P
Red alder	<i>Alnus rubra</i>	P
Red maple	<i>Acer rubrum</i>	P
Saltcedar	<i>Tamarix pentandra</i>	P
Sassafras	<i>Sassafras albidum</i>	P
Sourwood <sup>4</sup>	<i>Oxydendrum arboreum</i>	P
Sweetgum	<i>Liquidambar styraciflua</i>	P
Sycamore	<i>Platanus occidentalis</i>	P
Tanoak <sup>3</sup>	<i>Lithocarpus densiflorus</i>	P
Titi <sup>8</sup>	<i>Cynlla racemiflora</i>	P
Tree of heaven	<i>Ailanthus altissima</i>	P
Vaccinium spp.		
including:		
Blueberry	<i>Vaccinium</i> spp.	
Sparkleberry	<i>Vaccinium arboreum</i>	P
Water willow <sup>9</sup>	<i>Justicia americana</i>	P
Yellow poplar <sup>9</sup>	<i>Liriodendron tulipifera</i>	P

<sup>1</sup> Use higher rate where heavy or well-established infestations occur.

<sup>2</sup> Growth Habit: A = Annual, B = Biennial, P = Perennial

<sup>3</sup> Use higher labeled rates.

<sup>4</sup> Best control with applications before formation of fall leaf color

<sup>5</sup> Tank mix with glyphosate

<sup>6</sup> Degree of control may be species dependent.

<sup>7</sup> For water oak (*Quercus nigra*), laurel oak (*Q. lauriflora*), willow oak (*Q. phellos*), and live oak (*Q. virginiana*), use higher labeled rates.

<sup>8</sup> Suppression only

<sup>9</sup> Use not permitted in California unless otherwise directed by supplemental labeling.



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