# 1/4/2010



### U.S. ENVIRONMENTAL PROTECTION AGENCY

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

NOTICE OF PESTICIDE:

\_\_ Registration

X Reregistration

(under FIFRA, as amended)

EPA Reg. Number:

241-387

Date of Issuance:

1-4-10

Term of Issuance:

Name of Pesticide Product:

Arsenal 75 SG Herbicide

Name and Address of Registrant (include ZIP Code):

**BASF** Corporation

26 Davis Drive

Research Triangle Park, NC 27709

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is reregistered in accordance with FIFRA provided that you:

1) Submit and/or cite all data required for registration/reregistration review of your product when the Agency requires all registrants of similar products to submit data.

Signature of Approving Official:

Jim Tompkins

Team Leader

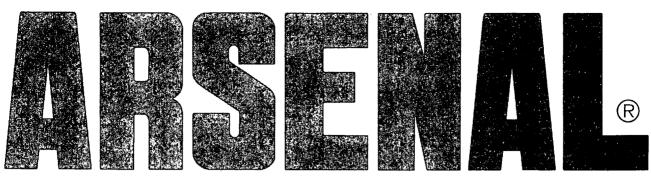
Herbicide Branch, Team 25/ Registration Division (7505P) Date:

1-4-10

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- 2. To the First Aid section, change "If on Skin" to "If on Skin or Clothing".
- 3. Delete the text "Remove contaminated clothing and wash before reuse" from the Hazards to Humans and Domestic Animals statements.
- 4. Because the acute toxicity review specifies gloves for all handlers, the text "for all mixers and loaders, plus applicators using handheld equipment" must be deleted from the glove statement in the PPE section.
- 5. Because this product only contains uses that are outside of the scope of WPS, Agricultural Use Requirements and Non-Agricultural Use Requirements boxes are not needed for this product. The Non-Agricultural Use Requirements box should be deleted but the text "Do not enter or allow others to enter the treated areas until sprays have dried" must remain on the label.
- 6. On page 3, change "Arsenal 75 SG herbicide should be used only in accordance with recommendations" to "Arsenal 75 SG herbicide must be used only in accordance with directions". Change "General Information" to "Product Information". Change "such as railroad" to "including railroad" and delete "and other similar areas". Change "Arsenal 75 SG is recommended" to "Arsenal 75 SG may be used".
- 7. On page 4, change "uniformly apply the recommended amount" to "uniformly apply the specified amount". On page 6, change "specific recommendations" to "specific directions". On page 7, change this product is not recommended for use under pavement" to "this product is not to be used under pavement". On page 8, change "in accordance with the recommendations" to "in accordance with the directions".

A stamped copy of the label is enclosed for your records. You must submit one copy of the final printed label before you release the product for shipment. Products shipped after 12 months from the date of this letter or the next printing of the label whichever occurs first, must bear the new revised label. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA. Your release for shipment of the product constitutes acceptance of these conditions. This label supersedes all other previously accepted labels. If you have any questions please call Erik Kraft at 703-308-9358 or email at Kraft.Erik@epa.gov.



# 75 SG herbicide

Active Ingredient:

.imazapyr: (2-14-5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1;H-imidazol-2-yl]-3-pyridinecarboxylic acid)

25.0%

Otner ingredients Total:

EPA Est. No.

EPA Reg. No. 241-387

# KEER 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 this 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;

ACCEPTED with COMMENTS In EPA Letter Dated:

Under the Federal Insecticide, Fungicide, and Rodemicide Act as amended; for the pesticide registered under EPA Reg. No

241397

**Net Contents:** 



FIRST AID		
lf on skin	<ul> <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>	
If in eyes	<ul> <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>	
If inhaled	<ul> <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>	
<del></del>	HOT LINE NUMBER	

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information 1-800-832-HELP (4357).

### PRECAUTIONARY STATEMENTS

# HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

### Personal Protective Equipment (PPE)

Some materials that are chemical resistant to this product are barrier laminate, butyl rubber, or polyethylene. 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
- Shoes plus socks
- Chemical-resistant gloves for all mixers and loaders, plus applicators using handheld equipment

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

### **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.

### **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 directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate. See **DIRECTIONS FOR USE** for additional precautions and requirements.

### PHYSICAL AND CHEMICAL HAZARDS

Spray solutions of **Arsenal® 75 SG herbicide** should be mixed, stored, and applied only in stainless steel, riberglass, plastic, and plastic-lined steel containers.

DO NOT mix, store, or apply Arsenal 75 SG or spray solutions of Arsenal 75 SG in unlined steel (except stainless steel) containers or spray tanks.

### IMPORTANT 338

DO NOT use on food or feed crops? 20 NOT treat irrigation ditches, or water used for crop irrigation or for domestic uses. Keep from contact with fertilizers, insectivides, fungicides and seeds. DO NOT apply except as recommended or drain or flush equipment on or near designable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. DO NOT use on lawns, walks, driveways, tennis courts, or similar areas.

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Prevent drift of spray to desirable plants. **DO NOT USE** in California.

Clean application equipment after using this product by thoroughly flushing with water.

### **DIRECTIONS FOR USE**

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

**Arsenal® 75 SG herbicide** should be used only in accordance with recommendations on the leaflet label attached to the container. Keep containers closed to avoid spills and contamination.

For maintenance of noncropland sites described above, **Arsenal 75 SG** may be applied to nonirrigation ditches and low-lying areas when water has drained but may be isolated in pockets due to uneven or unlevel conditions.

**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.

### 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.

Noncrop weed control is not within the scope of the Worker Protection Standard. See the **GENERAL INFORMATION** section of this label for a description of noncrop sites.

**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.** Store in original container and keep closed. Store in a cool, dry place.

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

### **CONTAINER DISPOSAL**

(for plastic containers)

Nonrefillable Container. DO NOT reuse or refill this container. After completely emptying container into application equipment, 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.

(for paper or plastic bags)
Nonrefillable Container. DO NOT reuse or refill this

**container.** After completely emptying container into application equipment, dispose of empty bag in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

#### IN CASE OF SPILL

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

CHEMTREC 1-800-424-9300

BASF Corporation 1-800-832-HELP (4357)

### **GENERAL INFORMATION**

**Arsenal 75 SG** is a soluble granule to be mixed with water and a surfactant and applied as a spray solution to non-cropland areas such as railroad, utility, pipeline and highway rights-of-way, utility plant sites, petroleum tank farms, pumping installations, fence rows, storage areas, non-irrigation ditchbanks, and other similar areas.

**Arsenal 75 SG** is recommended for the establishment and maintenance of wildlife openings. **Arsenal 75 SG** may also be used for the release of unimproved bermudagrass (see specific directions) and for use under certain paved surfaces (see specific directions).

Arsenal 75 SG will control most annual and perennial grasses and broadleaf weeds in addition to many brush and vine species and Arsenal 75 SG will provide residual control of labeled weeds which germinate in the treated areas. This product may be applied either preemergence or postemergence to the weeds; however, postemergence application is the method of choice in most situations, particularly for perennial species. For maximum activity, weeds should be growing vigorously at the time of postemergence application and the spray solution should include a surfactant (See ADJUVANTS section for specific recommendations). These solutions may be applied selectively by using low-volume techniques or may be applied broadcast by using ground equipment or aerial equipment. In addition, Arsenal 75 SG may also be used for stump and cut stem treatments (see specific directions).

Arsenal 75 SG is readily absorbed through leaves, stems, and roots and is translocated rapidly throughout the blant, with accumulation in the meristematic regions. Treated plants stop growing soon after spray application, Chlorosis appears first in the newest leaves, and recrosis spreads from this point. In perennials, the harbicide is translocated into, and kills, underground storage organs which prevents regrowth. Chlorosis and tissue necrosis may not be apparent in some plant species until two weeks after application. Complete kill of plants may not occurring soveral weeks. Applications of Arsenal 75 SG are rainfast one hour after treatment.

### **ADJUVANTS**

Postemergence applications of Arsenal 75 SG require a spray adjuvant.

Nonionic Surfactants: Use a nonionic surfactant at the rate 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 an HLB (hydrophilic to lipophilic balance) ratio between 12 and 17 with at least 60% surfactant in the formulated product (alcohols, fatty acids, oils, ethylene glycol or diethylene glycol should not be considered as surfactants to meet the above requirements).

Methylated Seed Oils or Vegetable Oil Concentrates: Instead of a surfactant, a vegetable-based seed oil concentrate may be used at the rate of 1.5 to 2 pints per acre. Research indicates that these oils may aid in the deposition and uptake of Arsenal® 75 SG herbicide under moisture or temperature stress.

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

Fertilizer/Surfactant Blends: Nitrogen-based liquid fertilizers such as 28%N, 32%N, 10-34-0, or ammonium sulfate, may be added at the rate of 2 to 3 pints per acre in combination with the recommended rate of nonionic surfactant or vegetable/seed oil concentrate. The use of fertilizers in a tank mix without a nonionic surfactant is not recommended.

### **Spray Drift Requirements**

### **Aerial Applications**

- 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 Applications**

- 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.

### **BRUSH CONTROL**

#### **AERIAL APPLICATIONS**

All precautions should be taken to minimize or eliminate spray drift. Fixed-wing aircraft and helicopters can be used to apply **Arsenal 75 SG**. However, **DO NOT** make applications by fixed-wing aircraft 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 recommended label rate. To avoid drift, applications should not be made during inversion conditions, when winds are gusty, or any other conditions which allow drift. Side trimming is not recommended with **Arsenal 75 SG** unless death of treated tree can be tolerated.

Uniformly apply the recommended amount of **Arsenal 75 SG** in 5 to 30 gallons of water per acre; include in the spray solution a nonionic surfactant or methylated seed oil or manufacturer's label rate of a silicone-based surfactant (See the **ADJUVANTS** section of this label for specific recommendations). A foam-reducing agent may be added at the recommended label rate, if needed.

**IMPORTANT:** 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 APPLICATIONS**

IMPORTANT: To minimize spray drift, select proper nozzles to avoid spraying a fine mist, use pressures less than 50 psi, and do not spray under gusty or windy conditions. Add a foam-reducing agent, if needed, and a spray pattern indicator, if desired, at the recommended label rates. Clean application equipment after using this product by the roughly flushing with water.

When making applications to rights-of-way corridors where desirable tree roots may extend, use 0.3 to 1.0 pound of **Arsenal 75 SG** per acre in combination with recommended to use rates higher than 1.0 pound per acre in these situations as injury or a death of desirable trees may occur when their roots extend into treated zones.

#### Side Trimming

DO NOT side trim with Arsenal 75 SG unless severe injury or death of the treated tree can be tolerated.

**Arsenal 75 SG** is readily translocated and can result in death of the entire tree.

### **Low Volume**

Use equipment calibrated to deliver 5 to 20 gallons of spray solution per acre. To prepare the spray solution,

thoroughly mix in water a sufficient quantity of Arsenal® 75 SG herbicide to apply 0.25 to 0.50 pound of Arsenal 75 SG per acre, plus a recommended surfactant (See the ADJUVANTS section of this label for specific recommendations). A foam-reducing agent may be applied at the recommended label rate, if needed. For control of difficult brush species (see WEEDS CONTROLLED section for relative susceptibility of weed species), use the higher concentrations of herbicide and/or spray volumes but DO NOT apply more than 2.0 pounds of Arsenal 75 SG per acre. Excessive wetting of foliage is not recommended.

# SUGGESTED TANK MIXES AND APPLICATION RATES\*

Target Vegetation	Arsenal 75 SG Rate (pound/acre)	Tank Mix
Mixed hardwoods without elm, locust, or pine	0.33 to 0.50	Surfactant
Mixed hardwoods containing elm, locust, and pine	0.25 to 0.33	Accord® at 2 to 3% by volume plus surfactant
Mixed hardwoods with locust and pine but no elm	0.25 to 0.33	Krenite® at 2 to 5% by volume plus surfactant
Mixed hard- woods with locust and elm but no pine	0.25 to 0.33	Escort® at 2 ozs/Acre or 2.3 grams/gal plus surfactant

<sup>\*</sup>Tank mixes with 2,4-D or products containing 2,4-D have resulted in reduced efficacy of **Arsenal 75 SG**.

### **MEASURING CHART**

A 1.33 pound water-soluble package of **Arsenal 75 SG** contains 1.0 pound acid equivalent of imazapyr.

**Application Tips:** For low volume, select proper nozzles to avoid overapplication. Proper application is critical to ensure desirable results. Best results are achieved when the 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.

Recommended 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 guns allows for the use of both a flat fan and cone tips on the same gun.

**Proper Spray Pattern:** Moisten, but do not drench target vegetation causing spray solution to run off.

### Low Volume with Backpacks

For brush up to 4 feet tall, spray down on the crown, covering crown and penetrating approximately 70% of the plant.

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

For brush over 8 feet tall, spray at least two sides of the target brush in smooth zigzag motions from crown to bottom.

# Low Volume with Hydraulic Handgun Application Equipment

Use same technique as described above for individual stem treatments.

For broadcast applications, 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 which contacts the understory may result in severe injury or death of plants in the understory.

# Arsenal 75 SG SPRAY SOLUTION MIXING GUIDE

Arsenal 75 SG	Number of 1.33 pound Arsenal 75 SG water-soluble bags				
Rate (pounds/	1	2	3	4	5
acre)		(ad	cres trea	ted)	
0.04	33.3	66.5	99.8	133.0	166.3
0.08	16.6	33.3	49.9	66.5	83.2
0.13	10.6	21.3	31.9	42.6	53.2
0.17	7.8	15.7	23.5	31.3	39.1
0.25	5.3	10.6	16.0	21.3 %	> 23:6
0.33	4.0	8.1	12.1	16.1 ુ	, ,24.2
0.50	2.6	5.3	8.0)22	§30.6	13.3
0.70	1.9	3.8	5.7	, <del>7</del> .6	5° -9.5°
1.00	1.3	2.7	4.0 <sup>5</sup>	ა.გ.3	; <i>5</i> .7°
1.33	1.0	2.0	3.0°°	<u>}</u> °°4,0	5:0
2.00	0.7	1.3	2.0 °°	2.7	ું 3.3.

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### **High Volumes**

For optimum performance when spraying medium to high density brush, 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 around cover injury, and injury to desirable species. To prepare the spray solution, thoroughly mix Arsenal® 75 SG herbicide at a rate of 0.7 to 2.0 pounds per acre (see IMPORTANT section under GROUND APPLICATIONS) in water and add a surfactant (See ADJUVANTS section for specific recommendations and rates of surfactants). A foam-reducing agent may be added at the recommended label rate, if needed. For control of difficult species (see WEEDS CONTROLLED section for relative susceptibility of weed species), use the higher concentrations of herbicide and/or spray volumes but DO NOT apply more than 2 pounds of Arsenal 75 SG per acre. Uniformly cover the foliage of the vegetation to be controlled but **DO NOT** apply to runoff. Excessive wetting of foliage is not recommended.

### TANK MIXES FOR BRUSH CONTROL

Arsenal 75 SG may be tank mixed with Accord®, Roundup®, Krenite®, Escort®, Telar®, Tordon® K, Garlon® 3A, Banvel®, and Vanquish® to provide control of Arsenal 75 SG tolerant species.

Consult manufacturer's labels for specific rates and weeds controlled. Always follow the more restrictive label when making an application involving tank mixes. Tank mixing with 2,4-D or products which contain 2,4-D have resulted in reduced performance of **Arsenal 75 SG**.

### **CUT STUBBLE**

Arsenal 75 SG can be applied within 2 weeks after mechanical mowing or cutting of brush. To suppress or control resprouting, uniformly apply a spray solution of Arsenal 75 SG at the rate of 0.3 to 0.7 pounds per acre to the cut area. Arsenal 75 SG may be tank mixed with Tordon K to aid in control or suppression of brush. The addition of 5% (v/v) or more of a penetrating agent can aid in uptake through the bark or exposed roots.

Cut stubble applications are made to the soil and cut brush stumps. This type of application may increase ground cover injury. However, vegetation will recover. Making applications of **Arsenal 75 SG** directly to the soil can increase potential root uptake causing injury or death of desirable trees.

Efficacy can be increased and root uptake by desirable vegetation can be decreased if the brush is allowed to regrow and the foliage is treated. See the **BRUSH CONTROL** section of this label.

### STUMP AND CUT STEM TREATMENTS

**Arsenal 75 SG** may be used to control undesirable woody vegetation on noncropland by applying the **Arsenal 75 SG** solution to the cambium area of freshly cut stump surfaces or to fresh cuts on the stem of the target woody vegetation. Applications can be made at any time of the year except during periods of heavy sap flow in the spring.

**DO NOT** overapply solution causing runoff or puddling.

Mixing: Arsenal 75 SG may be mixed as either a concentrated or dilute solution for stump and cut stem treatments. The dilute solution may be used for applications to the surface of the stump or to cuts on the stem of the target woody vegetation. Concentrated solutions may be used for applications to cuts on the stem. Use of the concentrated solution permits application to fewer cuts on the stem, especially for large diameter trees. Follow the application instructions to determine proper application techniques for each type of solution.

To prepare a dilute solution, mix 1.33 pounds Arsenal 75 SG (one water-soluble package) with 4 to 8 gallons of water. If temperatures are such that freezing of the spray mixture may occur, antifreeze (ethylene glycol) may be used according to manufacturer's label to prevent freezing. The use of a surfactant or penetrating agent may improve uptake through partially callused cambiums. To prepare a concentrated solution, mix 1.33 pounds of Arsenal 75 SG with no more than 1 quart of water and agitate well.

### **APPLICATION WITH DILUTE SOLUTIONS**

**For cut stump treatments:** 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).

For tree injection treatments: Using standard injection equipment, apply 1 milliliter of solution at each injection site around the tree with no more than one-inch intervals between cut edges. Ensure that the injector completely penetrates the bark at each injection site.

For frill or girdle treatments: Using a hatchet, machete, or similar device, make cuts through the bark at intervals around the tree with no more than two-inch intervals between cut edges. Spray or brush the solution into each cut until thoroughly wet.

### **APPLICATION WITH CONCENTRATED SOLUTIONS**

For tree injection treatments: Using standard injection equipment, apply 1 milliliter (1/5 teaspoon) of solution at each injection site. Make at least one 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 and a 6-inch DBH tree will receive 2 injection cuts at approximately equal intervals around the tree.

For frill or girdle treatments: Using a hatchet, machete, or similar device, make cuts through the bark at approximately equal intervals around the tree. Make at least one cut for every 3 inches of DBH on the target tree. For example, a 3-inch DBH tree will receive 1 cut and a 6-inch DBH tree will receive 2 cuts. Spray or brush the solution into each cut until thoroughly wet.

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

## FOR CONTROL OF UNDESIRABLE WEEDS UNDER PAVED SURFACES

**Arsenal® 75 SG herbicide** 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.

**Arsenal 75 SG** should be used 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, they should be removed by scalping with a grader blade to a depth sufficient to ensure their complete removal.

**IMPORTANT:** Paving should follow **Arsenal 75 SG** applications as soon as possible. **DO NOT** apply where the chemical may contact the roots of desirable trees or other plants.

The product is not recommended for use under pavement on residential properties such as driveways or parking lots, nor is it recommended 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 this product is applied where roots are present or where they may extend into the treated area. Roots of trees and shrubs may extend a considerable distance beyond the branch extremities or drip line.

#### **APPLICATION DIRECTIONS FOR PAVED SURFACES**

Applications should be made to the soil surface only when final grade is established. **DO NOT** move soil following **Arsenal 75 SG** application.

Apply **Arsenal 75 SG** in sufficient water (at least 100 gals per acre) to ensure thorough and uniform wetting of the soil surface, including the shoulder areas. Add **Arsenal 75 SG** at a rate of 2.0 pounds per acre to clean water in the spray tank during the filling operation. Agitate before spraying.

If the soil is not moist prior to treatment, incorporation of **Arsenal 75 SG** is needed for herbicide activation. **Arsenal 75 SG** can be incorporated 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.

## FOR CONTROL OF UNDESIRABLE WEEDS IN UNIMPROVED BERMUDAGRASS AND BAHIAGRASS

**Arsenal 75 SG** may be used on unimproved bermudagrass and bahiagrass turf such as roadsides, utility rights-of-way and other noncropland industrial sites. The application of **Arsenal 75 SG** 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 75 SG** 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 with a spray pressure of 20 to 50 psi.

IMPORTANT: Temporary yellowing of grass may occur when treatment is made after growth commences.

DO NOT add surfactant in excess of the recommended rate (1 oz per 25 gallons of spray solution).

DO NOT APPLY to grass during its first growing season.

DO NOT APPLY to grass that is under stress from drought, disease, insects, or other causes.

#### **DOSAGE RATES AND TIMING**

Bermudagrass. Apply Arsenal 75 SG at 0.125 to 0.33 pound per acre when the bermudagrass is dormant. Apply Arsenal 75 SG at 0.125 to 0.17 pound per acre after the bermudagrass has initiated greenup. Include in the spray solution a surfactant (see preceding IMPORTANT statement).

For additional preemergence control of annual grasses and small seeded broadleaf weeds, add

**Pendulum® AquaCap™ herbicide** at the rate of 2.1 to 4.2 qts per acre. Consult the **Pendulum** label for weeds controlled and for other use directions and precautions.

For control of Johnsongrass in bermudagrass turf, apply Arsenal 75 SG at 0.17 pound per acre plus Roundup® at 12 ozs per acre plus surfactant. For additional control of broadleaves and vines, Garlon® 3A may be added to the above mix at the rate of 1 to 2 pints per acre. Observe all precautions and restrictions on the Garlon 3A and Roundup labels.

**Bahiagrass.** Apply **Arsenal 75 SG** at 0.8 to 0.17 pound per acre when the bahiagrass is dormant or after the grass has initiated greenup but has not exceeded 25% greenup. Include in the spray solution a surfactant (See **ADJUVANTS** section for specific recommendations on surfactants).

### **WEEDS CONTROLLED**

Bedstraw (Galium spp.)
Bishopweed (Ptilimnium capillaceum)
Buttercup (Ranunculus parviflorus)
Carolina geranium (Geranium carolinianum)
Fescue (Festuca spp.)
Foxtail (Setaria spp.)
Little barley (Hordeum pusillum)
Seedling Johnsongrass (Sorghum haiebense)
Wild carrot (Daucus carota)
White clover (Trifolium repens)
Yellow woodsorrel (Oxalis stricta)

GRASS GROWTH AND

## GRASS GROWTH AND SEEDHEAD SUPPRESSION

**Arsenal 75 SG** may be used to suppress growth and seedhead development of certain turfgrass in unimproved areas. When applied to desirable turf, **Arsenal 75 SG** may result in temporary turf damage and/or discoloration. Effects to the desirable turf may vary with environmental conditions. For optimum performance, application should be made prior to culm elongation. Applications may be

made before or after mowing. If applied prior to mowing, allow at least three days of active growth before mowing. If following a mowing, allow sufficient time for the grasses to recover before applying this product or injury may be amplified.

**DO NOT APPLY** to turf under stress (drought, cold, insect damaged, etc.) or severe injury or death may occur.

**Bermudagrass.** Apply **Arsenal® 75 SG herbicide** at 0.125 to 0.17 pound per acre from early greenup to prior to seedhead initiation. **DO NOT** add a surfactant for this application.

Cool Season Unimproved Turf. Apply Arsenal 75 SG at 0.04 pound per acre plus 0.25% nonionic surfactant. For increased suppression, Arsenal 75 SG may be tank mixed with such products as Campaign® (24 ozs per acre) or Embark® (8 ozs per acre). Tank mixes may increase injury to desired turf. Consult each product label for recommended 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 75 SG.

# TOTAL VEGETATION CONTROL WHERE BAREGROUND IS DESIRED

Arsenal 75 SG is an effective herbicide for preemergence and postemergence control of many annual and perennial broadleaf and grass weeds where bareground is desired. Arsenal 75 SG is particularly effective on hard-to-control perennial grasses. Arsenal 75 SG can be used alone or in tank mix with Roundup®, Finale®, diuron, Karmex®, Pendulum®, simazine, Banvel®, Vanquish®, or Oust® herbicides. The degree and duration of control are dependent on the rate of Arsenal 75 SG used, tank mix partner, the volume of carrier, soil texture, rainfall and other conditions. See the table below for rates in your specific region.

Consult manufacturer's labels for specific rates and weeds controlled. Always follow the more restrictive label when making an application involving tank mixes.

# TANK MIX RECOMMENDATIONS FOR BAREGROUND

Herbicide Rates per Acre\*

Arsenal 75 SG (pounds)	Pendulum® AquaCap™ (quarts)	Pendulum® 3.3 EC	diuron
0.5 to 1.0	(quarts) 4.2	(quarts) 4.8	(lbs ai) 4 to 6
0.7 to 1.3	4.2	4.8	6 to 10
1.0 to 2.0	4.2	4.8	8 to 12

<sup>\*</sup> Use higher rates for fall applications and in areas that have not been previously treated or that feature heavy infestations.

Applications of **Arsenal 75 SG** may be made anytime 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 Applications: Always use a spray adjuvant (see ADJUVANTS section of this label) when making

a postemergence application. For optimum performance on tough-to-control annual grasses, applications should be made at a total volume of 100 gallons per acre or less. For quicker burndown or brown-out of target weeds, Arsenal 75 SG may be tank mixed with products such as Roundup or Finale. Tank mixes with 2,4-D or products containing 2,4-D have reduced performance of Arsenal 75 SG. Always follow the more restrictive label when tank mixing.

Spot Treatments: Arsenal 75 SG may be used as a followup treatment to control escapes or weed encroachment in a bareground situation. To prepare the spray solution, thoroughly mix in water sufficient quantity of Arsenal 75 SG to apply 0.25 to 0.50 pound of Arsenal 75 SG per acre, plus a recommended surfactant (See the ADJUVANTS section of this label for specific recommendations). For increased burndown, include Roundup, Finale, or similar products. For added residual weed control or to increase the weed spectrum, add Pendulum or diuron. Always follow the more restrictive label when tank mixing.

#### **WEEDS CONTROLLED**

Arsenal 75 SG will provide preemergence 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 75 SG. For established biennials and perennials, postemergence applications of Arsenal 75 SG are recommended. The rates shown below pertain 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 section of GROUND APPLICATIONS); low-volume applications may provide control of the target species with less Arsenal 75 SG per acre than is shown for the broadcast treatments. Arsenal 75 SG should be used only in accordance with the recommendations on this label and the leaflet label.

### Grasses

Wild barley

Woolly cupgrass<sup>6</sup>

Grasses			
Common Name	Genus Species	Annual/Perennial/Biennial <sup>2</sup>	
Apply 0.7 to 1.0 pound Arse	enal® 75 SG herbicide per acre¹		
Annual bluegrass	(Poa annua)	Α	
Broadleaf signalgrass	(Brachiaria platyphylla)	Α	
Canada bluegrass	(Poa compressa)	Р	
Downy brome	(Bromus tectorum)	А	
Fescue	(Festuca spp.)	A/P	
Foxtail	(Setaria spp.)	А	
Italian ryegrass	(Lolium multiflorum)	А	
Johnsongrass	(Sorghum halepense)	Р	
Kentucky bluegrass	(Poa pratensis)	Р	
Lovegrass	(Eragrostis spp.)	A/P	
Orchardgrass	(Dactylis glomerata)	P	
Paragrass	(Brachiaria mutica)	Р	
Quackgrass	(Agropyron repens)	Р	
Sandbur	(Cenchrus spp.)	Α	
Sand dropseed	(Sporobulus cryptandrus)	Α	
Smooth brome	(Bromus inermis)	Р	
Vaseygrass	(Paspalum urvillei)	Р	
Wild oats	(Avena fatua)	А	
Witchgrass	(Panicum capillare)	Α	
Apply 1.0 to 1.3 pounds Ars	senal 75 SG per acre¹		
Barnyardgrass <sup>6</sup>	(Echinochloa crus-gali)	Α	
Beardgrass	(Andropogon spp.)	P	
Bluegrass, annual <sup>6</sup>	(Poa annua)	Α	
Cheat	(Bromus secalinus)	Α	
Crabgrass	(Digitaria spp.)	Α	
Crowfootgrass <sup>6</sup>	(Dactyloctenium aegyptium)	Α	
Fall panicum	(Panicum dichotomiflorum)	Α	
Giant reed	(Arundo donax)	Α	
Goosegrass	(Eleusine indica)	Α	
ltchgrass <sup>6</sup>	(Rottboellia exaltata)	Α	
Junglerice <sup>6</sup>	(Echinochloa colonum)	Α	
Lovegrass <sup>6</sup>	(Eragrostis spp.)	A ;,,,,,,,	
Maidencane	(Panicum hemitomon)	Α ,, ,	
Panicum, browntop⁵	(Panicum fasciculatum)	A ; ; ; ; ; ;	
Panicum, Texas <sup>6</sup>	(Panicum texanum)	A, , , , , , , , , , , , , , , , , , ,	
Prairie threeawn	(Aristida oligantha)	P) 10 3333	
Reed canarygrass	(Phalaris arundinacea)	P333775 3	
Sandbur, field <sup>6</sup>	(Cenchrus incertus)	A , 3 , 3 , 3 , 3 , 3 , 3 , 3 , 3 , 3 ,	
Signalgrass <sup>6</sup>	(Brachiaria platyphylla)	A 23 3 3 3	
Torpedograss	(Panicum repens)	P ,,,,,,,	
14 m 1 t	/Hardaum ann 1	Λ , , , , , , , , , , , , , , , , , , ,	

(Hordeum spp.)

(Eriochloa villosa)

Grasses (continued)

Common Name	Genus Species	Annual/Perennial/Biennial <sup>2</sup>
Apply 1.3 to 2.0 pounds	Arsenal® 75 SG herbicide per acre	1
Bahiagrass	(Paspalum notatum)	P
Bermudagrass	(Cynodon dactylon)	P
Big bluestem	(Andropogon gerardii)	P
Cattail	(Typha spp.)	P
Cogongrass	(Imperata cylindrica)	P
Dallisgrass	(Paspalum dilatatum)	Р
Feathertop	(Pennisetum villosum)	. Р
Guineagrass	(Panicum maximum)	Р
Phragmites	(Phragmites australis)	P
Prairie cordgrass	(Spartina pectinata)	P
Saltgrass	(Distichlis stricta)	Р
Sand dropseed	(Sporobolus cryptandrus)	P
Sprangletop <sup>6</sup>	(Leptochloa spp.)	Α
Timothy	(Phleum pratense)	P
Wirestem muhly	(Muhlenbergia frondosa)	Р

### **Broadleaf Weeds**

### Apply 0.7 to 1.0 pound Arsenal 75 SG per acre<sup>1</sup>

Apply 0.7 to 1.0 poulld Als	eliai 75 Su per acre		
Alligatorweed	(Alternanthera philoxeroides)	A/P	
Burdock	(Arctium spp.)	В	
Camphorweed	(Heterotheca subaxillaris)	Р	
Carpetweed	(Mollugo verticillata)	Α	
Carolina geranium	(Geranium carolinianum)	Α	
Clover	(Trifolium spp.)	A/P	
Common chickweed	(Stellaria media)	Α	
Common ragweed	(Ambrosia artemisiifolia)	Α	
Dandelion	(Taraxacum officinale)	Р	
Dogfennel	(Eupatorium capillifolium)	Α	
Filaree	(Erodium spp.)	Α	
Fleabane	(Erigeron spp.)	Α	
Hoary vervain	(Verbena stricta)	Р	
Horseweed	(Conyza canadensis)	Α	) 1 ))))))
Indian mustard	(Brassica juncea)	Α	)
Kochia <sup>7</sup>	(Kochia scoparia)	Α	) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )
Lambsquarters	(Chenopodium album)	A; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	٠
Lespedeza	(Lespedeza spp.)	₽ →	3
Miner's lettuce	(Montia perfoliata)	A	, , , , , , , , , , , , , , , , , , ,
Mullein	(Verbascum spp.)	В ', , '	5 , 3 5 , 3 7 , 3
Nettleleaf goosefoot	(Chenopodium murale)	Appagab,	د د د د
Oxeye daisy	. (Chrysanthemum leucanthemum)	P هو گو عام	
Pepperweed	(Lepidium spp.)	Α	ეეკე ეეკე
Pigweed	(Amaranthus spp.)	Α	د و <b>ر</b> د و ر
Plantain	(Plantago spp.)	Р	້າ ກັບ
Puncturevine	(Tribulus terrestris)	Α	
Russian thistle	(Salsola kali)	Α	
Smartweed	(Polygonum spp.)	A/P	
Sorrell	(Rumex spp.)	Р	
Sunflower	(Helianthus spp.)	Α	

Broadleaf Weeds (continued)

Broadleaf Weeds (continu	ued)	•
Common Name	Genus Species	Annual/Perennial/Biennial <sup>2</sup>
Apply 0.7 to 1.0 pound Arsen	al® 75 SG herbicide per acre¹	
Sweet clover	(Melilotus spp.)	A/B
Tansymustard	(Descurainia pinnata)	Α
Western ragweed	(Ambrosia psilostachya)	Р
Wild carrot	(Daucus carota)	В
Wild lettuce	(Lactuca spp.)	A/B
Wild parsnip	(Pastinaca sativa)	В
Wild turnip	(Brassica campestris)	В
Woollyleaf bursage	(Franseria tomentosa)	Р
Yellow woodsorrel	(Oxalis stricta)	Р
Apply 1.0 to 1.3 pounds Arse	nal 75 SG per acre¹	
Broom snakeweed <sup>3</sup>	(Gutierrezia sarothrae)	Р
Bull thistle	(Cirsium vulgare)	В
Burclover <sup>6</sup>	(Medicago spp.)	. <b>A</b>
Chickweed, mouseear7	(Cerastium vulgatum)	Α
Clover, hop <sup>6</sup>	(Trifolium procumbens)	Α
Cocklebur	(Xanthium strumarium)	Α
Cudweed <sup>6</sup>	(Gnaphalium spp.)	Α
Desert camelthorn	(Alhagi pseudalhagi)	Р
Diffuse knapweed	(Centaurea diffusa)	Α
Dock	(Rumex spp.)	·P
Fiddleneck <sup>6</sup>	(Amsinckia intermedia)	Α
Goldenrod	(Solidago spp.)	Р
Henbit <sup>6</sup>	(Lamium aplexicaule)	Α
Knotweed, prostrate <sup>6</sup>	(Polygonum aviculare)	A/P
Pokeweed	(Phytolacca americana)	P
Purple loosestrife <sup>3</sup>	(Lythrum salicaria)	P
Purslane	(Portulaca spp.)	Α
Pusley, Florida <sup>6</sup>	(Richardia scabra)	Α
Rocket, London <sup>6</sup>	(Sisymbrium irio)	Α
Rush skeletonweed <sup>3</sup>	(Chondrilla juncea)	В
Saltbush	(Atriplex spp.)	A
Shepherd's-purse <sup>6</sup>	(Capsella bursa-pastoris)	Α
Spurge, annual <sup>s</sup>	(Euphorbia spp.)	A ; ; , ; ,
Stinging nettle <sup>3</sup>	(Urtica dioica) `	<b>P</b> 331437
Velvetleaf <sup>6</sup>	(Abutilon theophrasti)	A3 '3 , , ,
Yellow starthistle	(Centaurea solstitialis)	A 201141 200010
Apply 1.3 to 2.0 pounds Arser	nal 75 SG per acre¹	
Arrowwood	(Pluchea sericea)	$A_{00}$
Canada thistle	(Cirsium arvense)	P ທິງລາງ
Giant ragweed	(Ambrosia trifida)	A 33,33
Grey rabbitbrush	(Chrysothamnus nauseosus)	P
Japanese bamboo/knotweed	(Polygonum cuspidatum)	Р
Little mallow	(Malva parviflora)	В
Milkweed	(Asclepias spp.)	Р
Primrose	(Oenothera kunthiana)	Р

Broadleaf Weeds (continued)

broadleal weeds (continued	·	
Common Name	Genus Species	Annual/Perennial/Biennial <sup>2</sup>
Apply 1.3 to 2.0 pounds Arsena	al® 75 SG herbicide per acre¹	
Russian knapweed	(Centaurea repens)	Р
Silverleaf nightshade	(Solanum elaeagnifolium)	Р
Sowthistle	(Sonchus spp.)	Α
Texas thistle	(Cirsium texanum)	Р
		,
Vines and Brambles		
Apply 0.3 pound Arsenal 75 SG	i per acre	
Field bindweed	(Convolvulus arvensis)	Р
Hedge bindweed	(Calystegia sepium)	А
-		
Apply 0.7 to 1.0 pound Arsenal	75 SG per acre <sup>1</sup>	
Wild buckwheat	(Polygonum convolvulus)	Р
	,	-
Apply 1.0 to 1.3 pounds Arsena	al 75 SG per acre¹	
Greenbriar	(Smilax spp.)	Р
Honeysuckle	(Lonicera spp.)	Р
Morningglory	(Ipomoea spp.)	A/P
Poison ivy	(Rhus radicans)	Р
Redvine	(Brunnichia cirrhosa)	Р
Wild rose	(Rosa spp.)	Р
Including: Multiflora rose	(Rosa multiflora)	Р
Macartney rose	(Rosa bractreata)	Р
Apply 1.3 to 2.0 pounds Arsena Blackberry <sup>4</sup> Dewberry <sup>4</sup> Kudzu <sup>5</sup> Trumpetcreeper	Al 75 SG per acre¹ (Rubus spp.) (Rubus spp.) (Pueraria lobata) (Campsis radicans)	P P P
Virginia creeper	(Parthenocissus quinquefolia)	Р
Wild grape	(Vitis spp.)	Р
Brush Species	175 00	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Apply 1.3 to 2.0 pounds Arsena		Ρ , , , ,
American beech	(Fagus grandifolia)	P ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;
Ash	(Fraxinus spp.)	_, , , ,
Bald cypress	(Taxodium distichum)	P
Bigleaf maple	(Acer macrophylum)	P ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;
Black locust <sup>8</sup>	(Robinia pseudoacacia)	P. 3.3.3.
Blackgum	(Nyssa sylvatica)	n
Boxelder	(Acer negundo)	
Brazilian peppertree	(Schinus terebinthifolius)	
Chinaham	(Prunus spp.)	P
Chinaberry Chinase tellow tree	(Melia azadarach)	P
Chinese tallow-tree	(Sapium sebiferum)	P P
Dogwood	(Cornus spp.)	P
Elm <sup>10</sup>	(Ulmus spp.)	₽ P
Hawthorn	(Crataegus spp.)	<b>.</b>

### **Brush Species** (continued)

Common Name	Genus Species	Annual/Perennial/Biennial <sup>2</sup>		
Apply 1.3 to 2.0 pounds Arsenal® 75 SG herbicide per acre¹				
Hickory	(Carya spp.)	Р		
Honeylocust <sup>9</sup>	(Gleditsia triacanthos)	Р		
Maple	(Acer spp.)	Р		
Melaleuca	(Melaleuca quiquenervia)	. Ъ		
Mulberry	(Morus spp.)	Р		
Oak	(Quercus spp.)	P		
Persimmon	(Diospyros virginiana)	Р		
Pine <sup>11</sup>	(Pinus spp.)	P		
Poplar	(Populus spp.)	Р		
Privet	(Ligustrum vulgare)	P		
Red alder	(Alnus rubra)	P		
Red maple	(Acer rubrum)	Р		
Russian olive	(Eleagnus angustifolia)	P		
Saltcedar	(Tamarix ramosissima)	Р		
Sassafras	(Sassafras albidum)	. P		
Sourwood	(Oxydendrum arboreum)	P		
Sumac	(Rhus spp.)	Р		
Sweetgum	(Liquidambar styraciflua)	Р		
Willow	(Salix spp.)	Р		
Yellow poplar	(Liriodendron tulipifera)	Р		

<sup>&</sup>lt;sup>1</sup> The higher rates should be used where heavy or well-established infestations occur.

<sup>&</sup>lt;sup>2</sup> A = Annual. B = Biennial. P = Perennial.

<sup>&</sup>lt;sup>3</sup> For best results, early postemergence applications are required.

<sup>&</sup>lt;sup>4</sup> The degree of control is species dependent. Some Rubus species may not be completely controlled.

<sup>&</sup>lt;sup>5</sup> Use a minimum of 75 GPA. Control of established stands may require repeat applications.

<sup>&</sup>lt;sup>6</sup> For preemergence control, tank mix with **Pendulum**<sup>®</sup>.

<sup>&</sup>lt;sup>7</sup> For preemergence control, tank mix with **Pendulum** or **Karmex®**.

<sup>&</sup>lt;sup>8</sup> Tank mix with Roundup®, Accord®, Escort®, Krenite®, Garlon® 3A or Tordon® K.

<sup>&</sup>lt;sup>9</sup> Tank mix with Roundup, Accord, Garlon 3A, or Tordon K.

<sup>&</sup>lt;sup>10</sup> Tank mix with Roundup, Accord, or Escort.

<sup>11</sup> Tank mix with Accord, Roundup, Garlon 3A, Tordon K, or Krenite.

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