| 51036-4 | 405 |
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09/4/2005

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| Please read instructions on reverse bel  | оге сотрешту тотт.    |                     | Form Approvi             | ed, OMB No. 2070   | 3-0060, Approval expires 05-31-96  |
|--|-----------------------|---------------------|--------------------------|--------------------|------------------------------------|
| . CDΛ  | United State          | es                  | 🗌 Registr                | ation              | OPP Identifier Number              |
| EPA En   | vironmental Prote     | ction Agenc         | y 🗀 Amend                | ment               |                                    |
|  | Washington, DC        | 20460               | Other                    |                    |                                    |
| <u> </u>   | Applic                | ation for Pe        | esticide - Sectio        | n I                |                                    |
| 1. Company/Product Number  |                       | 2. EPA              | Product Manager          |                    | 3. Proposed Classification         |
| 51036-405  |                       | JIM T               | OMPKINS                  |                    |                                    |
| 4. Company/Product (Name) SULFOMETURON 75EG HE   | RBICIDE               | PM#<br>25           |                          |                    | None Restricted                    |
| 5. Name and Address of Applicant (   |                       |                     | edited Review.           | n accordance v     | with FIFRA Section 3(c)(3)         |
|  |                       |                     |                          |                    | in composition and labeling        |
| MICRO FLO COMPANY LLC  | ,                     | to:                 |                          |                    | •                                  |
| P.O. BOX 772099  |                       | EPAR                | leg. No                  |                    |                                    |
| MEMPHIS, TN 38117  |                       | Brodu               | ct Name                  |                    |                                    |
|  |                       | Froduc              | ot Name                  |                    | <del></del>                        |
| Check if this is a new a   | ddress                |                     |                          |                    |                                    |
|  |                       | Section             |                          |                    |                                    |
| Amendment – Explain below.   | ,                     |                     | Final printed la         | bels in response t | o Agen NOTIFICATION                |
| Resubmission in response to A  | Agency letter dated   | _                   | Me Too" Applic           | cation             |                                    |
| Notification - Explain below.  |                       |                     | Other - Explain          |                    | FEB 0 4 2005                       |
| Explanation: Use additiona   | . • . ,               | • •                 |                          | ,                  |                                    |
| Notification of addition of a<br>This notification is consistent   |                       |                     |                          |                    | OED 450 40 and no other            |
| changes have been made to  |                       |                     |                          |                    |                                    |
|  |                       |                     |                          |                    | d that if this notification is not |
| consistent with the terms of I   |                       |                     |                          |                    |                                    |
| enforcement action and pena  | alties under sections | 12 and 14 of        | FIFRA.                   | <u> </u>           | <del></del>                        |
|  |                       | Section             | on - III                 |                    |                                    |
| Material This Product Will Be Pa   |                       |                     |                          |                    |                                    |
| Child-Resistant Packaging  | Unit Packaging        |                     | Water Soluble Pac        | kaging             | 2. Type of Container               |
| ∐ Yes*<br>□ No   | │                     | ·                   | Yes No                   | 1                  | Metal Plastic                      |
| L NO   | If "Yes"              | No. per             | If "Yes"                 | No. per            | Glass                              |
| *Certification must  | Unit Packaging wgt.   |                     | Package wgt.             | container          | Paper                              |
| be submitted   |                       |                     |                          | {                  | Other (Specifiy)                   |
| 3. Location of Net Contents Informa  | ation 4. Size         | (s) Retail Contair  | ner                      | 5. Location o      | of Label Directions                |
| Label Con  | tainer                |                     |                          | On Labe            | el .                               |
|  |                       |                     |                          | On label           | ing accompanying product           |
| 6. Manner in Which Label is Affixed  | Par                   | ograph<br>per glued | Other                    |                    |                                    |
| Stenciled Section 11/  |                       |                     |                          |                    |                                    |
| Section - IV  1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application; |                       |                     |                          |                    |                                    |
| Name   | <del></del>           | Title               | to be contacted, if hec  | essary, to proces. | Telephone No. (Include Area        |
| Bill Washburn  |                       |                     | y Affairs Speciali       | st                 | Code) 901-432-5118                 |
|  | <br>Certific          | ation               |                          |                    | 6. Date Application                |
| I certify that the statements I have n   |                       |                     | ereto are true, accurate | and complete. I    | Received                           |
| acknowledge that any knowingly fal-<br>under applicable law.   |                       |                     |                          |                    | (Stamped)                          |
| 2. Signature   |                       | 3. Ţitle            |                          |                    | 7.                                 |
| Berlinou   | Leur-                 | Regulator           | y Affairs Specialis      | st                 | •                                  |
| 4. Typed Name  |                       | 5. Date             |                          |                    |                                    |
| Bill Washburn  |                       |                     | January 14, 200          | 95                 |                                    |

# **SULFOMETURON 75EG**

Herbicide

Dispersible Granules

ACTIVE INGREDIENT: "
Sulfometuron methyl

**KEEP OUT OF REACH OF CHILDREN** 

# CAUTION

# **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 treatment advice.

# IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

# IF SWALLOWED:

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

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact:

#### **EMERGENCY NUMBERS:**

- Transportation or spill, call CHEMTREC 800-424-9300.
- Human health, call 800-832-HELP(4357)
- Animal health, call ASPCA at 800-345-4735.

EPA Reg. No. 51036-405 AD 121504 NET CONTENTS: **EPA Est. No. XXXX-XX-XXXX** 

Manufactured By:
MICRO FLO COMPANY LLC
P.O. BOX 772099
MEMPHIS, TN 38117

NOTIFICATION

FEB 0 4 2005

# PRECAUTIONARY STATEMENTS

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION! Causes (moderate) eye injury (irritation). Avoid contact with eyes or cloth.r.c.

## PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- 1. Long-sleeved shirt and long pants.
- 2. 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.

#### **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 by cleaning of equipment or disposal of equipment washwaters.

#### **GENERAL INFORMATION**

SULFOMETURON 75EG is a dispersible granule that is mixed in water and applied as a spray. SULFOMETURON 75EG controls many annual and perennial grasses and broadleaf weeds in forestry and noncrop sites.

SULFOMETURON 75EG may be used for general weed control on industrial noncrop sites and for selective weed control in certain types of unimproved turf grasses on industrial sites. It can also be used for selective weed control in forest site preparation and in the release of several types of pines and certain hardwoods.

SULFOMETURON 75EG controls weeds by both preemergence and postemergence activity. Preemergence treatments control or suppress weeds through root uptake while postemergence control works through root and foliar uptake. The best results are obtained when the application is made before or during the early stages of weed growth before weeds develop an established root system. Moisture is required to move SULFOMETURON 75EG into the root zone of weeds for preemergence control. When rainfall is low, SULFOMETURON 75EG may not provide satisfactory control.

It is noncorrosive, nonflammable, nonvolatile, and does not freeze.

For best postemergence results, apply SULFOMETURON 75EG to young, actively growing weeds. The use rate depends upon the weed species, weed size at application, and soil texture. 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

Use a high rate on established plants and on fine-textured soils and a lower rate on smaller weeds and coarse-textured soils.

#### **ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY**

SULFOMETURON 75EG is absorbed by both the roots and foliage of plants, rapidly inhibiting the growth of susceptible weeds. Two to 3 weeks after application to weeds, leaf growth slows, and the growing points turn reddish-purple. Within 4 to 6 weeks of application, leaf veins and leaves become discolored, and the growing points subsequently die.

Warm, moist conditions following application accelerate the herbicidal activity of SULFOMETURON 75EG; cold, dry conditions delay the herbicidal activity. In addition, weeds hardened-off by drought stress are less susceptible to SULFOMETURON 75EG.

Rainfall is needed to move SULFOMETURON 75EG into the soil for preemergence weed control, but postemergence weed control may be reduced if rainfall occurs too soon after application.

#### RESISTANCE

When herbicides with the same mode of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant weed biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. These resistant weed biotypes may not be adequately controlled. Cultural practices such as tillage, preventing weed escapes from going to seed, and using herbicides with different modes of action within and between crop seasons can aid in delaying the proliferation and possible dominance of herbicide resistant weed biotypes.

# **DIRECTIONS FOR USE**

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

SULFOMETURON 75EG should be used only in accordance with recommendations on this label or in separately published MICRO FLO Company LLC (MICRO FLO) recommendations.

MICRO FLO will not be responsible for losses or damages resulting from the use of this product in any manner not specifically recommended by MICRO FLO. User assumes all risks associated with such non-recommended use.

Do not use on food or feed crops.

Do not apply more than 8 ounces per acre per year.

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.

#### 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.
- · Chemical resistant gloves made of any waterproof material.
- Shoes plus socks.

#### **FORESTRY**

SULFOMETURON 75EG may be applied by helicopter or ground equipment to control many broadleaf weeds and grasses on forestry sites. Impregnated fertilizer may also be applied by fixed-wing aircraft. Sulfometuron 75EG is recommended for site preparation and herbaceous weed control after planting for both conifers and hardwoods (broadleaf deciduous species). Tank mixes with other forestry herbicides are permissable but always follow the most restrictive label. Make applications before or soon after weeds emerge unless tank mixing with a product that will control established weeds. Use lower recommended rates on coarse-textured soils (i.e., loamy sands, sandy loams) and higher recommended rates on fine-textured soils (i.e. sandy clay loams and silty clay loams).

## **WEEDS CONTROLLED**

Weed species controlled by SULFOMETURON 75EG when applied at the use rates indicated:

| Common Name           | Scientific Name          |
|-----------------------|--------------------------|
| Chickweed             | Stellaria spp.           |
| Crabgrass             | Digitaria app.           |
| Dogfennel             | Eupatorium capillifolium |
| Fescue                | Festuca spp.             |
| Fireweed (willowweed) | Epilobium spp.           |
| Goldenrod             | Solidago spp.            |
| Horseweed             | Conyza canadensis        |
| Kentucky bluegrass    | Poa pratensis            |
| Nutsedge (yellow)     | Cyperus esculentus       |
| Panicums              |                          |
| Broadleaf             | Panicum adspersum        |
| Fall                  | Panicum dichotomiflorum  |
| Pokeweed              | Pyhtolacca americana     |
| Ragweed               | Ambrosia spp.            |
| Shepherd's purse      | Capsella bursa-pastoris  |
| White snakeroot       | Eupatorium rugosum       |
| Yellow sweetclover    | Melilotus officinalis    |

See also weeds controlled under non-agricultural uses.

# SITE PREPARATION PRIOR TO PLANTING CONIFERS

Use rates and planting restrictions:

| Region and Crop Species                | Rate<br>(oz/A) | Planting Restriction   |
|--|----------------|--|
| Southeast                              |                |  |
| Loblolly pine (Pinus taeda)            | 2 to 8         | Plant in the planting season after treatment   |
| Longleaf pine (Pinus palustris)        | 2 to 8         | Plant in the planting season after treatment   |
| Slash pine (Pinus elliotti)            | 2 to 8         | Plant in the planting season after treatment   |
| Virginia pine (Pinus virginiana)       | 2 to 8         | Plant in the planting season after treatment   |
| Northeast and Lake States              | <u> </u>       |  |
| Black spruce (Picea mariana)           | 2 to 4         | Plant not less than 13 months after treatment  |
| Red pine (Pinus resinosa)              | 0.5 to 2       | Plant the following spring or summer but for 1 to 2 oz plant not less than 3 months after treatment and for 0.5 to 1 oz plant no less than 30 days after treatment |
| Larch (Larix spp.)                     | 2.5 to 4       | Plant the following spring or summer but not less than 8 months after treatment  |
| Tamarack (Larix laricina)              | 2.5 to 4       | Plant the following spring or summer but not less than 8 months after treatment  |
| West                                   | <del> </del>   |  |
| Coastal redwood (Sequoia sempervirens) | 2 to 4         |  |
| Douglas-fir (Pseudotsuga menziesii)    | 2 to 4         |  |
| Grand fir (Abies grandis)              | 2 to 4         |  |
| Hemlock (Tsuga spp.)                   | 2 to 4         |  |
| Lodgepole pine (Pinus contorta)        | 2 to 4         |  |
| Ponderosa pine (Pinus ponderosa)       | 2 to 4         | In California and other arid areas, apply in fall and transplant the following spring  |
| Western larch (Larix occidentalis)     | 2 to 4         |  |
| Western white pine (Pinus monticola)   | 2 to 4         |  |
| White fir (Abies concolor)             | 2 to 4         |  |
| Western red cedar (Thuja plicata)      | 2 to 3         |  |

Tank mixes with other forestry site preparation herbicides such as Arsenal®, Chopper®, OneStep® and glyphosate are permissable. Observe all precautions and restrictions on the product labels. Always follow the most restrictive label.

If the user has experience indicating that conifer species other than those listed in the above table can be successfully established in areas treated with SULFOMETURON 75EG, these species may be planted. The user acepts all responsibility for injury on any conifer species not listed in the above table.

#### HERBACEOUS WEED CONTROL AFTER CONIFERS ARE PLANTED

Use rates and restrictions:

| Region and Crop Species                | Rate         | Restriction                                       |
|--|--------------|---|
| Southeast                              | (oz/A)       |   |
|  | 0.4- 0       |   |
| Loblolly pine (Pinus taeda)            | 2 to 8       |   |
| Longleaf pine (Pinus palustris)        | 2 to 8       |   |
| Slash pine (Pinus elliotti)            | 2 to 8       |   |
| Virginia pine (Pinus virginiana)       | 2 to 8       |   |
| Eastern white pine (Pinus strobus)     | 1 to 1.5     |   |
| Northeast and Lake States              | <del> </del> |   |
| Jack pine (Pinus banksiana)            | 2 to 8       | Treat prior to budbreak when trees are dormant    |
| •                                      |              | and do not apply less than 1 year after           |
|  |              | transplanting or planting.                        |
| Virginia pine (Pinus virginiana)       | 2 to 8       | Treat prior to budbreak when trees are dormant    |
|  | }            | and do not apply less than 1 year after           |
|  | •            | transplanting or planting.                        |
| Eastern white pne (Pinus strobus)      | 1 to 1.5     | Treat prior to budbreak when trees are dormant    |
| ,                                      |              | and do not apply less than 1 year after           |
|  | }            | transplanting or planting.                        |
| White spruce (Picea glauca)            | 1.5 to 3     | Treat prior to budbreak when trees are dormant    |
|  | }            | and do not apply less than 1 year after           |
|  |              | transplanting or planting.                        |
| Red pine (Pinus resinosa)              | 0.5 to 2     | Treat prior to budbreak when trees are dormant    |
| ,                                      |              | and do not apply less than 1 year after           |
|  | _            | transplanting or planting.                        |
| West                                   |              |   |
| Coastal redwood (Sequoia sempervirens) | 2 to 4       |   |
| Douglas-fir (Pseudotsuga menziesii)    | 2 to 4       |   |
| Grand fir (Abies grandis)              | 2 to 4       |   |
| Hemlock (Tsuga spp.)                   | 2 to 4       |   |
| Lodgepole pine (Pinus contorta)        | 2 to 4       |   |
| Ponderosa pine (Pinus ponderosa)       | 2 to 4       | In California and other arid areas apply on       |
| •                                      |              | dormant seedlings in the spring following fall    |
|  |              | planting or in the fall following spring planting |
| Western larch (Larix occidentalis)     | 2 to 4       |   |
| Western white pine (Pinus monticola)   | 2 to 4       |   |
| White fir (Abies concolor)             | 2 to 4       |   |
| Western red cedar (Thuja plicata)      | 2 to 3       |   |

When conifers are dormant they are less susceptible to injury. When the spray directly contacts the foliage during the period from bud break in the spring to hardening of the final resting bud in the fall, severe injury or mortality is possible.

# ARSENAL® Applicators Concentrate plus SULFOMETURON 75EG Tank Mix

In loblolly pine apply 4 to 6 oz Arsenal Applicators Concentrate herbicide plus 1-2 oz SULFOMETURON 75EG. The application of Arsenal Applicators Concentrate plus SULFOMETURON 75EG on other conifer species may cause growth suppression.



# **VELPAR® plus SULFOMETURON 75EG Tank Mix**

In loblolly, longleaf or slash pine, apply 2 to 4 oz of SULFOMETURON 75EG plus 2 to 3 pints of Velpar L herbicide or 2/3 to 1 lb of Velpar DF herbicide. Treatment with these tank mixes during periods of high humidity and high temperature may injure or kill trees.

# AATREX® 4L plus SULFOMETURON 75EG Tank Mix

On tree species specifically listed on both the Aatrex 4L and SULFOMETURON 75EG labels apply 4 to 8 pints of Aatrex 4L plus 2 to 4 oz SULFOMETURON 75EG. Use the higher rates on medium to fine textured soils where organic matter exceeds 2%.

If the user has experience indicating that conifer species other than those listed in the above table can be successfully treated with SULFOMETURON 75EG, these species may be treated. The user acepts all responsibility for injury on any conifer species not listed in the above table.

#### **FERTILIZER IMPREGNATION**

Dry bulk fertilizer may be impregnated with SULFOMETURON 75EG and applied to loblolly and slash pine sites. Uniform impregnation and application of dry fertilization is required to avoid tree injury or mortality and poor weed control. To impregnate fertilizer use a conveyor or closed drum system. If fertilizer is very dusty use a suitable additive to reduce dust prior to impregnation. Use the SULFOMETURON 75EG rates recommended above for loblolly and slash pine. Apply this rate to the amount of fertilizer to be used per acre. First mix the SULFOMETURON 75EG with sufficient water to uniformly coat the fertilizer. Thorough aggitation is required. Use fine spray nozzles to uniformly cover the fertilizer. An absorptive additive such as Microcel E (Johns Manville Product Company) or HiSil – 233 (Pittsburg Plate Glass) may be required to produce a dry, free flowing mixture. Apply impregnated fertilizer as soon as possible after impregnation since impregnated fertilizer may become lumpy or difficult to apply following storage. Application may be made by ground or by helicopter or fixed winged aircraft. Overlaps, skips or other factors resulting in non-uniform distribution of impregnated fertilizer will result in poor weed control and may cause tree injury or mortality.

Fertilizers that have been successfully used include diammonium phosphate, potassium chloride, 16-16-16 and 24-4-4. Fertilizers that are not compatible with with SULFOMETURON 75EG include potassium nitrate, sodium nitrate and triple super phosphate. Do not impregnate SULFOMETURON 75EG on limestone.

Clean equipment used to impregnate, transport and apply fertilizer following the instructions under sprayer cleanup. Do not use this equipment to make subsequent applications to crops.

# SITE PREPARATION PRIOR TO PLANTING HARDWOODS

Use rates:

| Crop Species                              | Rate<br>(oz/A) |
|---|----------------|
| Northern red oak (Quercus rubra)          | 3 to 5         |
| White oak (Quercus alba)                  | 3 to 5         |
| Chestnut oak (Quercus prinus)             | 3 to 5         |
| American sycamore (Platanus occidentalis) | 3 to 5         |
| White ash (Fraxinus americana)            | 3 to 5         |
| Green ash (Fraxinus pennsylvanica)        | 3 to 5         |
| Red maple (Acer rubrum)                   | 3 to 5         |
| Sweetgum (Liquidambar styraciflua)        | 3 to 5         |
| Yellow poplar (Liriodendron tulipifera)   | 3 to 5         |

## HERBACEOUS WEED CONTROL AFTER HARDWOODS HAVE BEEN PLANTING

Use rates:

| Crop Species                              | Rate<br>(oz/A) |
|---|----------------|
| American sycamore (Platanus occidentalis) | 1 to 4         |
| White ash (Fraxinus americana)            | 1 to 4         |
| Green ash (Fraxinus pennsylvanica)        | 1 to 4         |
| Bald cypress (Taxodium distichum)         | 1 to 4         |
| Oaks (Quercus spp.)                       | 1 to 4         |
| Red maple (Acer rubrum)                   | 1 to 4         |
| Sweetgum (Liquidambar styraciflua)        | 1 to 4         |
| Yellow poplar (Liriodendron tulipifera)   | 1 to 4         |

Treat dormant trees before bud swell. Applications made over the top after the trees have broken dormancy may injure or kill the trees.

#### **HYBRID POPLAR**

SULFOMETURON 75EG may be used for site preparation or herbaceous weed after planting for hybrid poplar growing west of the Cascade Mountains or for herbaceous weed control after planting in the Lake States. SULFOMETURON 75EG must be activated by overhead irrigation or rainfall before weeds become well established. Crop trees may exhibit temporary chlorosis (yellowing) or a small reduction in tree height during the year of use. Different clonal lines may vary in there tolerance to SULFOMETURON 75EG. Therefore, limit the first use on new clones to a small area. To avoid injury when treating after planting, treat when trees are dormant and do not allow the spray to contact green buds or tissue.

## West of the Cascades

For site preparation prior to planting use 1 to 1.25 oz per acre when heavy weed infestations are expected or when maximum weed control is desired. Use 0.5 to 0.75 oz when light weed infestations are expected or when small diamter cuttings will be planted. Do not plant less than 3 days after treatment. Herbaceous weed control treatments may be made after hybrid poplar has been established for a minimum of 1 year. Use 1 to 1.25 oz per acre when heavy weed infestations are expected or when maximum weed control is desired. Use 0.5 to 0.75 oz when light weed infestations are expected or when small diameter were planted.

#### **Lake States**

Herbaceous weed control treatments may be made after hybrid poplar has been established for a minimum of 1 year. Use a rate of 1 to 2 oz per acre in the fall or early winter or 1 oz per acre in the late winter or early spring.

# NATURAL HARDWOOD REGENERATION

SULFOMETURON 75EG may be used at a rate of 2 to 5 oz per acre to control herbaceous weeds on commercial reforestation areas where hardwood seedling regeneration is desired. For control of striped maple or beech, tank mix with glyphosate at a rate of 1 to 2 qts per acre (rate based on a glyphosate formulation containing 4 lb active ingregiant per gallon). Best results are achieved when applications are made from late summer to mid-fall. Hardwood seedligs present at the time of application may be severly injured or killed.

#### ADDITIONAL IMPORTANT PRECAUTIONS FOR FORESTRY APPLICATIONS

- Applications after planting should only occur after adequate rainfall has closed the planting slit and settled the soil around the roots.
- Do not use on Christmas trees or ornamentals.
- Injury or death of trees is possible under the following situations:
  - When applications are made to trees that are under stress from drought, diseases, animal or insect injury, winter injury, excessive soil moisture, planting shock, or other stresses that reduce vigour.
  - When used on hardwood trees growing in soils having a pH of 7 or greater.
  - When used on hardwood species that are not well matched to the site. An experienced forester should match hardwood species to the site.
  - When species other than those listed in the preceding recommendation are present on the site.
  - When the spray from applications made with a surfactant contacts trees. The user assumes all responsibility for tree injury or mortality if a surfactant is used.

#### **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.

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

SULFOMETURON 75EG herbicide should be mixed with water and an adjuvant and applied as a spray solution to provide weed control and/or turf height suppression on noncropland areas. Examples of noncropland areas include, but are not limited to railroad, utility, pipeline and highway rights-of-way, railroad crossings, utility plant sites, petroleum tank farms, pumping installations, non-agricultural fence rows, storage areas, non-irrigation ditchbanks, prairie sites, airports, industrial turf, governmental, private lands, non-residential turf fuel storage areas, and lumberyards. SULFOMETURON 75EG herbicide may be used for the release and/or suppression of bermudagrass, bahiagrass, smooth bromegrass, and crested wheatgrass. Avoid applications to recreational areas and areas where the surface is paved.

SULFOMETURON 75EG herbicide is readily absorbed through leaves, stems, and roots and is translocated rapidly throughout the plant, with accumulation in the meristematic regions. 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 storage organs which prevents regrowth. Chlorosis and tissue necrosis may not be apparent in some plant species for several weeks after application. Complete kill of plants may not occur for several weeks after application. Adequate soil moisture is important for optimum SULFOMETURON 75EG herbicide activity. When adequate soil moisture is present, SULFOMETURON 75EG herbicide will provide residual control of susceptible germinating weeds. Activity on established weeds will depend on the weed species and rooting depth.



# APPLICATIONS IN ARID REGIONS (Less than 20" Annual Rainfall)

Apply SULFOMETURON 75EG during the rainy or wet season at time when moisture is present and when the target vegetation is actively growing. Applications to target vegetation in times of drought stress may reduce preformance of SULFOMETURON 75EG. Always use a surfactant when making post emergent applications (See Spray Adjuvants sections).

# **WEEDS CONTROLLED**

| Common Name                         | Genus Species              | Rate per Acre (weight oz) |
|-------------------------------------|----------------------------|---------------------------|
| Annual bluegrass (6" to 12" tall)   | Poa annua                  | 1.3 to 2                  |
| Annual sowthistle                   | Sonchus oleraceus          | 1.3 to 2                  |
| Barnyardgrass (6" to 12" tall)      | Echinocloa crus-galli      | 1.3 to 2                  |
| Black Mustard                       | Brassica nigra             | 1.3 to 2                  |
| Buckhorm plantain                   | Plantago lanceolata        | 1.3 to 2                  |
| Burclover                           | Medicago arabica           | 1.3 to 2                  |
| Carolina geranium                   | Geranium carolinianum      | 1.3 to 2                  |
| Cheat (6" to 12" tall)              | Bromus secalinus           | 0.75 to 1.5               |
| Chickweed                           | Stellaria media            | 1.3 to 2                  |
| Common mallow                       | Malva neglecta             | 1.3 to 2                  |
| Common speedwell                    | Veronica officinalis       | 1.3 to 2                  |
| Common yarrow                       | Achillea millefolium       | 1.3 to 2                  |
| Curly dock                          | Rumex crispus              | 1.3 to 2                  |
| Downy brome (6" to 12" tall)        | Bromus tectorum            | 0.75 to 1.5               |
| Foxtail barley (6" to 12" tall)     | Festuca jubatum            | 1.3 to 2                  |
| Foxtail fescue (6" to 12" tall)     | Vulpia myuros              | 1.3 to 2                  |
| Italian ryegrass (6" to 12" tall)   | Lolium multiflorum         | 1.3 to 2                  |
| Jointed goatgrass (6" to 12" tall)  | Aegilops cylindrica        | 1.3 to 2                  |
| Medusahead (6" to 12" tall)         | Taeniatherum caput-medusae | 0.75 to 1.5               |
| Prickly coontail                    | Ceratophyllum echinatum    | 1.3 to 2                  |
| Red brome (6" to 12" tall)          | Bromus madritensis         | 1.3 to 2                  |
| Reed canarygrass (6" to 12" tall)   | Phalaris arundinacea       | 1.3 to 2                  |
| Ripgut brome (6" to 12" tall)       | Bromus diandrus            | 1.3 to 2                  |
| Seashore saltgrass (6" to 12" tall) | Distichlis spicata         | 1.3 to 2                  |
| Seaside heliotrope                  | Heliotropium curassavicum  | 1.3 to 2                  |
| Signalgrass (6" to 12" tall)        | Brachiaria spp.            | 1.3 to 2                  |
| Smooth brome                        | Bromus inermis             | 2 to 3                    |
| Spreading orach                     | Atriplex patula            | 1.3 to 2                  |
| Sunflower                           | Helianthus annuus          | 1.3 to 2                  |
| Western ragweed                     | Ambrosia psilostachya      | 1.3 to 2                  |
| Whitestem filaree                   | Erodium moschatum          | 1.3 to 2                  |
| Yellow foxtail (6" to 12" tall)     | Setaria glauca             | 1.3 to 2                  |

The weeds listed in High Rainfall Regions can also be controlled in Arid Regions; however, SULFOMETURON 75EG must be applied at higher rates (3 to 8 oz per acre) to control those weeds. These rates also provide better control in areas of heavy infestation where long-term weed control is desired.

# HIGH ANNUUAL RAINFALL REGIONS (More than 20" Annual Rainfall)

Apply SULFOMETURON 75EG when the target vegetation is actively growing. Applications to target vegetation in times of drought stress may reduce preformance of SULFOMETURON 75EG. Always use a



surfactant when making post emergent applications (See Spray Adjuvants sections). In areas where long term weed control is desired, applications of higher rates are needed. In areas where there are heavey infestations, soils with more than 2.5% organic matter, or areas with high moisture, the use of higher rates are recommended.

# **WEEDS CONTROLLED**

| Common Name                     | Genus Species               | Rate per Acre (weight oz) |
|---------------------------------|-----------------------------|---------------------------|
| Alta fescue                     | Festuca alta                | 3 to 5                    |
| Annual bluegrass                | Poa annua                   | 3 to 5                    |
| Annual ryegrass                 | Lolium multiflorum          | 3 to 5                    |
| Annual sowthistle               | Sonchus oleraceus           | 3 to 5                    |
| Bedstraw                        | Gallium aparine             | 6 to 8                    |
| Bahiagrass                      | Paspalum nutatum            | 3 to 5                    |
| Barnyardgrass                   | Echinocloa crus-galli       | 3 to 5                    |
| Bouncingbet                     | Saponaria officinalis       | 3 to 5                    |
| Burclover                       | Medicago arabica            | 3 to 5                    |
| Canada thistle                  | Cirsium arvense             | 6 to 8                    |
| Carolina geranium               | Geranium carolinianum       | 3 to 5                    |
| Common chickweed                | Stellaria media             | 3 to 5                    |
| Common dandelion                | Taraxacum officinale        | 3 to 5                    |
| Common speedwell                | Veronica officinalis.       | 3 to 5                    |
| Common yarrow                   | Achillea millefolium        | 3 to 5                    |
| Crimson clover                  | Trifolium incarnatum        | 3 to 5                    |
| Curly dock                      | Rumex crispus               | 6 to 8                    |
| Dogfennel                       | Eupatorium capillifolium    | 3 to 5                    |
| Downy brome                     | Bromus tectorum             | 3 to 5                    |
| Fescue                          | Festuca arundinacea         | 3 to 5                    |
| Foxtails (excluding green)      | Setaria spp.                | 3 to 5                    |
| Filaree (Redstem)               | Erodium cicutarium          | 6 to 8                    |
| Foxtail barley                  | Hordeum jubatum             | 3 to 5                    |
| Goldenrod                       | Solidago spp.               | 6 to 8                    |
| Hoary cress (white top)         | Cardaria spp.               | 3 to 5                    |
| Horsetail (Equisetum)           | Equisetum arvense           | 6 to 8                    |
| Indiangrass                     | Sorghastrum nutens          | 3 to 5                    |
| Italian ryegrass                | Lolium multiflorum          | 3 to 5                    |
| Johnsongrass *                  | Sorgum halapense            | 6 to 8                    |
| Kentucky bluegrass              | Poa pratensis               | 3 to 5                    |
| Kochia *                        | Kochia scoparia             | 2 to 8                    |
| Kudzu                           | Pueraria lobata             | 6 to 8                    |
| Little barley                   | Hordeum pusillum            | 3 to 5                    |
| Little mallow                   | Malva parviflora            | 3 to 5                    |
| Musk thistle                    | Cardus nutans               | 6 to 8                    |
| Mustard                         | Brassica spp.               | 3 to 5                    |
| Ox-eye daisy                    | Chrysanthemum leucanthermum | 3 to 5                    |
| Pepperweed                      | Lepideum virginicum         | 3 to 5                    |
| Pigweed                         | Amaranthus spp.             | 3 to 5                    |
| Prickly lettuce *               | Lactuca serriola            | 2 to 8                    |
| Purple starthistle              | Centaurea calcitrapa        | 3 to 5                    |
| Queene Ann's Lace (wild carrot) | Daucus carota               | 3 to 5                    |
| Ragweed                         | Ambrosia artemisiifolia     | 3 to 5                    |
| Red brome                       | Bromus madritensis          | 3 to 5                    |

| Red fescue           | Festuca rubra         | 3 to 5 |
|----------------------|-----------------------|--------|
| Reed canarygrass     | Phalaris arundinacea  | 3 to 5 |
| Ripgut brome         | Bromus diandrus       | 3 to 5 |
| Russian thistle *    | Salsola iberica       | 2 to 8 |
| Ryegrass*            | Lolium spp.           | 3 to 5 |
| Smooth brome         | Bromus inermis        | 3 to 5 |
| Sprangletop (annual) | Leptochloa spp.       | 3 to 5 |
| Sweet clover         | Melilotus spp.        | 3 to 5 |
| Sunflower            | Helianthus annuus     | 3 to 5 |
| Tansymustard         | Descurainia pinnata   | 3 to 5 |
| Tansy ragwort        | Senecio jacobaea      | 3 to 5 |
| Tumble mustard       | Sisymbrium altissimum | 3 to 5 |
| Turkey mullein       | Eremocarpus setigerus | 6 to 8 |
| Vetch                | Vicia spp.            | 3 to 5 |
| Wheat (volunteer)    | Triticum aestivum     | 3 to 5 |
| Wild blackberry      | Rubus spp.            | 6 to 8 |
| Wild oats            | Avena fatua           | 3 to 5 |
| Yellow rocket        | Barbarea vulgaris     | 3 to 5 |

<sup>\*</sup> Biotypes of Kochia, Russian thistle, Prickly lettuce, and Italian (annual) ryegrass have been documented to be resistent to SULFOMETURON 75EG. A herbicide with another or different mode of action that has these weeds listed as controlled should be tank mixed if these target weeds are in the areas of application. Applications should be made prior to seed development.

#### **TANK MIXES**

For use in noncrop areas, SULFOMETURON 75EG herbicide may be tank-mixed with PENDULUM® herbicide for additional control of late season annual grasses and certain broadleaves. For additional weed control in noncrop areas, SULFOMETURON 75EG herbicide may be tank-mixed with glyphosate, ARSENAL® herbicide, SAHARA® DG herbicide, diuron, FINALE™, triclopyr, MSMA, dicamba, metsulfuron, picloram, or other labeled products. A compatibility test is advised for products not listed.

#### FOR CONTROL OF UNDESIRABLE WEEDS UNDER PAVED SURFACES

SULFOMETURON 75EG can be used under asphalt and other paved ares, ONLY in industrial sites or where the pavement has a suitable barrier along the perrimeter that prevents incroachment of roots of desirable plants. Paving should follow SULFOMETURON 75EG herbicide applications as soon as possible. Avoid applications where the chemical may contact the roots of desirable trees or other plants.

Do not use Sulfometuron 75 EG under pavement in residential properties such as driveways, parking lots, or in recreational areas such as under bike or jogging paths, golf cart paths, tennis courts or where landscape planting would 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 the so called drip line.

SULFOMETURON 75EG applications should be made to the soil surface only when final grade is established. Do not move soil following SULFOMETURON 75EG herbicide applications. Apply SULFOMETURON 75EG herbicide in sufficient water to ensure thurough and uniform wetting of the soil surface including the shoulder areas. Add SULFOMETURON 75EG herbicide at rate of 4 to 8 oz of

<sup>\*</sup> For the best control of perennial johnsongrass, applications should be made early to late post emergence. Repeat applications may be required in treated areas where perennial johnsgrass is pre emergence at the time of application. Areas that are low lying or have standing water that is pocketed or pooled may require repeat applications for season long weed control.



product per acre to clean water in the spray tank during the filling operation. Agitate before spraying. If extended, long term weed control is desired or target weeds include woody brush or vines, SULFOMETURON 75EG herbicide can be tank mixed with SAHARA® herbicide at a rate of 10 to 19 pounds per acre.

# FOR CONTROL OF UNDESIRABLE WEEDS IN INDUSTRIAL OR NONCROPLAND BERMUDAGRASS

SULFOMETURON 75EG herbicide may be used on noncropland bermudagrass turf. Examples of noncropland areas include, but are not limited roadsides, utility rights-of-way, railroad crossings, airports, and non-irrigation drainage ditches.. Depending on bermudagrass type, timing of application, and SULFOMETURON 75EG herbicide rate, some foliar, stolon, and seedhead suppression may occur. IMPORTANT: Apply SULFOMETURON 75EG herbicide after bermudagrass has reached full green-up. Spring applications made prior to full green-up may delay green-up. DO NOT apply to grass under stress from drought, disease, insects or other causes. Simultaneous mow/spray operations may suppress internode development. After mowing, allow adequate foliage regrowth prior to SULFOMETURON 75EG application as some internode suppression may prevent bermudagrass from quickly recovering from mowing. Applications made with a surfactant may result in unacceptable turf injury or death. If this cannot be tolerated, avoid applications of SULFOMETURON 75EG herbicide in combination with a surfactant.

For control of labeled winter annual weeds in late winter or early spring, apply 1 to 2 ounces per acre of SULFOMETURON 75EG herbicide. Applications of SULFOMETURON 75EG during bermudagrass transition for m dormancy to green up, may delay or stunt green up of the bermudagrass stand. Avoid applications at this timing if delayed green up cannot be tolerated.

For control of labeled winter annual broadleaves and grasses as well as perennial cool season grass such as tall fescue, apply SULFOMETURON 75EG herbicide 1 to 4 ounces per acre in late fall to early winter.

For johnsongrass control in unimproved, noncropland bermudagrass stands, apply 2 to 3 ounces per acre SULFOMETURON 75EG herbicide with another herbicide labeled for johnsongrass control in unimproved bermudagrass turf (such as MSMA) to increase control.

For additional weed control, SULFOMETURON 75EG herbicide may be tank mixed with OVERDRIVE, PENDULUM, triclopyr, 2,4-D, MSMA, glyphosate, dicamba or other products registered for applications unimproved bermudagrass turf. Avoid applications to turf type or improved bermudagrass varieties if stand injury or loss cannot be tolerated.

# FOR CONTROL OF UNDESIRABLE WEEDS IN UNIMPROVED CENTIPEDEGRASS

SULFOMETURON 75EG herbicide may be applied at a rate of 1 to 2 oz per acre to established centipede grass for the control of annual broadleaf and grass weeds. Apply SULFOMETURON 75EG herbicide after centipede grass has reached full green-up. Spring applications made prior to full green-up may delay green-up. DO NOT apply to grass under stress from drought, disease, insects or other causes. Simultaneous mow/spray operations may suppress internode development. After mowing, allow adequate foliage regrowth prior to SULFOMETURON 75EG application as some internode suppression may prevent centipede grass from quickly recovering from mowing. Applications made with a surfactant may result in unacceptable turf injury or death. If this cannot be tolerated, avoid applications of SULFOMETURON 75EG herbicide in combination with a surfactant.

# FOR RELEASE AND SEEDHEAD SUPPRESSION IN BAHIAGRASS

SULFOMETURON 75EG herbicide may be used at a rate of 0.5 to 1 oz per acre to established stands of bahiagrass following 100% turf green up and prior to seedhead development. Make only one application per year. Applications made with a surfactant may result in unacceptable turf injury or death. If this



cannot be tolerated, avoid applications of SULFOMETURON 75EG herbicide in combination with a surfactant.

# FOR CONTROL OF UNDESIRABLE WEEDS IN SMOOTH BROMEGRASS AND CRESTED WHEATGRASSES

SULFOMETURON 75EG herbicide may be used on smooth bromegrass and crested wheatgrass. SULFOMETURON 75EG herbicide provides control of labeled grass and broadleaf weeds (see "WEEDS CONTROLLED" sections). Treatment of smooth bromegrass and wheatgrass with SULFOMETURON 75EG herbicide may result in foliar height and seedhead suppression. Applications made with a surfactant may result in unacceptable turf injury or death. If this cannot be tolerated, avoid applications of SULFOMETURON 75EG herbicide in combination with a surfactant.

Smooth Bromegrass and Crested Wheatgrass: Use SULFOMETURON 75EG herbicide at 1 oz per acre in the spring for weed control and growth suppression after smooth bromegrass and "wildtype" common Kentucky bluegrass have reached 100% green-up. Applications prior to 100% green-up may delay green-up. DO NOT apply to grass under stress from drought, disease, insects or other causes. Simultaneous mow/spray operations may suppress internode development. After mowing, allow adequate foliage regrowth prior to SULFOMETURON 75EG application as some internode suppression may prevent centipede grass from quickly recovering from mowing. Avoid applications to newly planted grass stands if injury or loss of stand cannot be tolerated. Make only one application per year. Applications made during grass stand dormancy may suppress green up in the spring.

## **GRASS REPLANT INTERVALS**

The following grasses may be replanted at least 3 months after a spring application of sulfometuron at use rates up to 1.5 oz per acre:

Green needlegrass, meadow brome, Russian wildrye and switchgrass.

The following grasses may be replanted at least 6 months after a spring application of sulfometuron at use rates up to 1.5 oz per acre:

Alta fescue, meadow foxtail, orchardgrass, smooth bromegrass, sheep fescue and western wheatgrass.

These grass replant intervals are recommended for soils with a pH of less than 7.5. Soils having a pH greater than 7.5 will require longer intervals due to the slower degradation rate. The recommended intervals are for applications made in spring. Because sulfometuron degradation is slowed by cold or frozen soils, applications made in the fall should consider the intervals as beginning in the spring following treatment.

There is considerable variation in response among species and types of grasses when seeded into areas treated with sulfometuron. If species other than those listed above are to be planted into areas treated with sulfometuron a field bioassay should be performed, or previous experience may be used to determine the feasibility of replanting treated areas.

Areas treated with sulfometuron should not be grazed by domestic livestock for a minimum of 1 year after treatment.



#### MIXING INSTRUCTIONS

Fill the spray tank one-half to three-quarters full with clean water. Use a calibrated measuring device to measure the required amount of SULFOMETURON 75EG herbicide. Add SULFOMETURON 75EG herbicide to the spray tank while agitating. If using an additional product add the recommended amount. Fill the remainder of the tank with water.

For postemergence applications, add a surfactant to the spray tank (see "SPRAY ADJUVANTS FOR POSTEMERGENCE APPLICATIONS" section of this label for specific recommendations). Maintain agitation while spraying to ensure a uniform spray mixture. An antifoaming agent may be added to the tank if needed.

#### **SPRAYING INSTRUCTIONS**

**DO NOT** apply during windy or gusty conditions unless applications are being made with a drift control agent and/or an enclosed or shielded spray system. **DO NOT** apply if rainfall is threatening.

## **GROUND APPLICATIONS:**

Uniformly apply with properly calibrated ground equipment in 2 or more gallons of water per acre. Application equipment, specially designed to make low volume application should be used when making applications using less than 10 gallons of water per acre. A spray pressure of 20 to 40 psi is recommended.

To achieve acceptable control of the target vegetation, good spray coverage of the weed foliage (postemergence) or soil surface (preemergence) is required. To achieve good spray coverage the sprayer must be calibrated to deliver the recommended spray volume and pressure and adjust the spray boom height to ensure proper coverage of weed foliage or soil surface (according to the manufacturer's recommendation). Avoid overlaps when spraying.

# **AERIAL APPLICATION:**

All precautions should be taken to minimize or eliminate spray drift. Only helicopters can be used to apply SULFOMETURON 75EG herbicide. Aerial equipment designed to minimize spray drift such as a helicopter equipped with a microfoil boom, or THRU-VALVE<sup>TM</sup> 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 under any other conditions that promote spray drift. Suggested spray volumes of 5 to 15 gallons per acre should be used to ensure thorough coverage of target species.

Uniformly apply recommended amount of SULFOMETURON 75EG herbicide, using enough water volume to provide adequate coverage of target area or foliage. Include an adjuvant in the spray solution (see "SPRAY ADJUVANTS FOR POSTEMERGENCE APPLICATIONS" section). A foam reducing agent may be added at the recommended rate, if needed. Aerial application to target species growing under the canopy of trees and brush may not receive sufficient spray coverage for effective control. For weed species with a recommended fall application timing (see "WEED CONTROL" section).

**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.

Avoid overlaps when spraying.



## SPRAY ADJUVANTS FOR POSTEMERGENCE APPLICATIONS

Postemergence applications of SULFOMETURON 75EG herbicide require a spray adjuvant. See "WEED CONTROL" section. Due to variations in surfactant contents, certain surfactants containing high amounts of alcohols, paraffin based petroleum oils, and other compounds which can increase phytotoxicity to desirable vegetation, it is recommended to choose a low phytotoxic surfactant. The addition of a spray adjuvant may increase injury on desired grass species.

**Methylated Seed Oils or Vegetable Oil Concentrates:** Instead of a surfactant, a methylated vegetable-based seed oil concentrate containing 5 to 20% surfactant may be used at the rate of 1.5 to 2 pints per acre. Methylated seed oils provide their greatest effects at 30 GPA or less. At spray volumes above 50 GPA, their advantage appears negated. When using spray volumes greater than 30 gallons per acre methylated seed oil or vegetable based seed oil concentrates should be mixed at a rate of 1% of the total spray volume or alternatively use a nonionic surfactant as described below.

**Nonionic Surfactants:** Use a nonionic surfactant at the rate of 0.25% 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 HLB (hydrophilic to lipophilic balance) ratio between 12 and 17 and having 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). Nonionic surfactants are the prefered adjuvant for SULFOMETURON 75EG herbicide when making seedhead or grass growth suppression applications

**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 as compared to conventional nonionic surfactants. However, some silicone-based surfactants may dry too quickly, limiting herbicide uptake and higher spray volumes may exhibit "run-off".

# 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 way to reduce drift potential is to apply large droplets (>150 - 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. 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 WILT NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS!

See Wind, Temperature and Humidity, and Temperature Inversions sections of this label.

# **Controlling Droplet Size - General Techniques**

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



- Pressure Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- 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.

# **Controlling Droplet Size - Aircraft**

- Number of Nozzles Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- Nozzle Type Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.

## **BOOM LENGTH AND HEIGHT**

- Boom Length (aircraft) For helicopters use a boom length and position that prevents droplets from entering the rotor vortices.
- Boom Height (aircraft) Application more than 10 ft above the canopy increases the potential for spray drift.
- Boom Height (ground) Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. The boom should remain level with the crop and have minimal bounce.

# WIND

Drift potential increases at wind speeds of less than 3 mph (due to variable direction and inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID GUSTY OR WINDLESS CONDITIONS.

**Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they effect spray drift.

# **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

#### SURFACE TEMPERATURE INVERSIONS

Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which causes 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. 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 a surface inversion, while 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 preventing drift and not interfering with uniform deposition of the product.

## SPRAYER CLEANUP

Thoroughly clean all mixing and spraying equipment following applications of SULFOMETURON 75EG as follows:

- 1. Drain tank; thoroughly rinse spray tanks, boom and hoses with clean water.
- 2. Fill the tank with water and 1 gallon of household ammonia (contains 3% active) for every 100 gallons of water. Flush the hoses, boom and nozzles with cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at lesast 15 minutes. Flush the hoses, boom and nozzles again with the cleaning solution, and then drain tank.

Equivalent amounts of an alternate-strength ammonia solution or a commercial cleaner can be used in the cleanout procedure. If a commercial cleaner is used, carefully read and follow the individual cleaner instructions.

- 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 lebeld site or at an approved waste disposal facility. If a commercial cleaner is used, follow the directions for rinsate disposal on the label.

# Notes:

- 1. Caution: DO NOT use chlorine bleach with ammonia, as dangerous gases will form. DO NOT clean equipment in an enclosed area.
- 2. Steam-cleaning aerial spray tanks is recommended before performing the above cleanout procedure to facilitate the removal of caked deposits.
- 3. When SULFOMETURON 75EG is tank mixed with other pesticides, all required cleanout procedures should be examined and the most rigorous procedure should be followed.

# **IMPORTANT PRECAUTIONS**

Injury to or loss of desirable trees or other plants may result from failure to observe the following:

- If equipment is drained or flushed on or near desirable 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 treat powdery dry soil or light, sand soil when there is little likelihood of rainfall soon after treatment. 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 SULFOMETURON 75EG may injure or kill most crops. Injury may be more severe when the crops are irrigated.



Applications made where runoff water flows onto agricultural land may injure crops. Applications
made during periods of intense rainfall, to soils saturated with water, surfaces paved with materials
such as asphalt or concrete, or soils through which rainfall will not readily penetrate may result in
runoff and movement of SULFOMETURON 75EG. DO NOT treat frozen soil. Treated soil should be
left undisturbed to reduce the potential for SULFOMETURON 75EG movement by soil erosion due to
wind or water.

DO NOT use on lawns, walks, driveways, tennis courts, or similar areas.

Keep from contact with fertilizers, insecticides, fungicides, and seeds.

**DO NOT** apply through any type of irrigation system.

**DO NOT** use the equipment used to mix or apply SULFOMETURON 75EG on crops. The mixing and application equipment may be used for forestry and noncrop applications only.

If noncrop or forested sites treated with SULFOMETURON 75EG are to be converted to a food, feed, or fiber agricultural crop, or to a horticultural crop, **DO NOT** plant the treated sites for at least one year after the SULFOMETURON 75EG application. To avoid damage to crops planted in these areas, and to ensure complete SULFOMETURON 75EG dissipation in treated sites, soil samples should be quantitatively analyzed, and a bioassay should be conducted before planting.

**DO NOT** use this product in the following counties of Colorado: Saguache, Rio Grande, Alamosa, Costilla and Conejos.

## STORAGE AND DISPOSAL

**PESTICIDE STORAGE**: Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage.

**PESTICIDE DISPOSAL**: Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL**: Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**NOTICE TO BUYER**: Purchase of this material does not confer any rights under patents of countries outside of the United States.

## CONDITIONS OF SALE AND WARRANTY

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January 14, 2005

Mr. Jim Tompkins, PM 25 Document Processing Desk (NOTIF) Office of Pesticide Programs - 7504C U.S. Environmental Protection Agency Crystal Mall 2, Room 266A 1801 South Bell Street Arlington, VA 22202

Subject:

Sulfometuron 75EG Herbicide

EPA Reg. No. 51036-405

**Notification of Addition of Sprayer Cleanup Instructions** 

Dear Mr. Tompkins:

Please find enclosed two copies of labeling – one highlighted, one clean – with the Sprayer Cleanup instructions added per PR Notice 98-10. This addition involves no change in the ingredient statements, statements of practical treatment, physical or chemical properties, storage and disposal, or directions for use. The instructions are added as an advisory on the proper procedure for cleaning equipment after use.

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 USC Sec 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Please sign and return the extra copy of this letter in the self-addressed stamped envelope provided as evidence of your acceptance of this notification. Should you have any additional questions, please do not hesitate to contact me at 901-432-5118.

Sincerely,

Bill Washburn

Regulatory Affairs Specialist

Big Washlum