

**METSULFURON 60EG IVM**

Dry Flowable Herbicide

**ACTIVE INGREDIENT:**

Metsulfuron methyl

Methyl 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]-carbonyl]amino]sulfonyl]benzoate ..... 60%

**OTHER INGREDIENTS:** ..... 40%**TOTAL:** ..... 100%**KEEP OUT OF REACH OF CHILDREN****CAUTION**

<b>FIRST AID</b>	
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>EMERGENCY NUMBERS:</b> <ul style="list-style-type: none"><li>• Transportation or spill, call CHEMTREC 800-424-9300.</li><li>• Human health, 800-832-HELP (4357).</li><li>• Animal health, call ASPCA at 800-345-4735</li></ul>	

See enclosed booklet for additional precautionary language.

EPA Reg. No. 51036-367

EPA Est. No.

NET CONTENTS: \_\_\_\_\_

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

**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.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

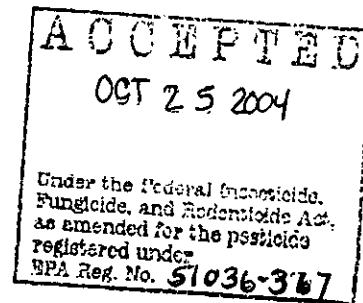
Some of the materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for category A on the EPA chemical-resistance category selection charts.

**Applicators and other handlers must wear:**

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

Chemical-resistant gloves made of any waterproof material (such as polyethylene or polyvinylchloride).

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**

RECEIVED  
10/20/04

by email

Users should:

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

#### ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

This herbicide is injurious to plants at extremely low concentrations. Nontarget plants may be adversely effected from drift and run-off.

#### IMPORTANT

DO NOT USE ON FOOD OR FEED CROPS EXCEPT AS RECOMMENDED BY THIS LABEL OR SUPPLEMENTAL LABELING.

Failure to observe the following information may result in injury to or loss of desirable trees or other plants:

- Do not apply METSULFURON 60EG IVM Herbicide (except as recommended), or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend or in locations where the chemical may be washed or moved into contact with their roots.
- Do not use on lawns, walks, driveways, tennis courts, or similar areas.
- Prevent drift of spray to desirable plants.
- Do not contaminate any body of water, including irrigation water.
- Keep from contact with fertilizers, insecticides, fungicides and seeds.

It is extremely important following a METSULFURON 60EG IVM application, that the sprayer is not used for application to crops. Low rates of METSULFURON 60EG IVM can kill or severely injure most crops (except small grains).

#### GENERAL INFORMATION

METSULFURON 60EG IVM is a dispersible granule that is mixed in water and applied as a spray. METSULFURON 60EG IVM controls many annual and perennial weeds and woody plants in noncrop areas and conifer plantations.

METSULFURON 60EG IVM can be used for general weed and brush control on industrial non-crop sites and for selective weed control in certain types of unimproved turf grasses on industrial sites and in native grasses. It can also be used for controlling and suppressing undesirable weeds and hardwoods in conifer plantations.

METSULFURON 60EG IVM controls weeds and woody plants primarily by postemergent activity. Although METSULFURON 60EG IVM has preemergence activity, best results are generally obtained when METSULFURON 60EG IVM is applied to foliage after emergence or dormancy break. Other than where noted, METSULFURON 60EG IVM will provide the best results when applied to young, actively growing weeds. The use rate is dependant upon the weed species and size at the time of application.

The degree and duration of control may be dependant upon 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

METSULFURON 60EG IVM can be applied to floodplains where surface water is not present, terrestrial areas of deltas and low lying areas where water is drained but may be isolated in pockets due to uneven or unlevel conditions.

METSULFURON 60EG IVM is noncorrosive, nonflammable, nonvolatile and does not freeze.

#### ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

METSULFURON 60EG IVM is absorbed primarily through the foliage of plants and by the roots to a lesser degree. Plant cell division is generally inhibited in sensitive plants within a few hours following uptake. Two to 4 weeks after application, leaf growth slows followed by discoloration and tissue death. The final effects on annual weeds are evident about 4 to 6 weeks after application. The ultimate effect on perennial weeds and woody plants occurs in the growing season following application.

While warm, moist conditions following treatment promote the activity of METSULFURON 60EG IVM, cold, dry conditions might reduce or delay activity. Weeds and brush hardened off by cold weather or drought stress may not be controlled. The use of a surfactant is recommended to enhance the control of susceptible plants, except where noted. Apply at a minimum rate (concentration) of 1/4% volume/volume (1 qt. per 100 gal. of spray solution), or at the manufacturer's recommended rate. Use only EPA approved surfactants containing at least 80% active ingredient. Certain types of surfactants, such as those incorporating acetic acid (i.e. LI-700), may not be compatible with METSULFURON 60EG IVM and can result in decreased performance. Certain surfactants may not be suitable for use on desirable plants, such as turf and conifers, listed on this label. Consult the surfactant manufacturer's label for appropriate uses.

Weed and brush control may be reduced if rainfall occurs soon after application.

#### **DIRECTIONS FOR USE**

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

METSULFURON 60EG IVM should be used only in accordance published recommendations on this label or in separate MICRO FLO recommendations. MICRO FLO will not be responsible in any manner 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.

For tank mixes use only those tank mix partners which are labeled for the appropriate use site. When tank mixing, observe all restrictions and limitations specified on the label of each product; always follow the most restrictive labeling. Test for compatibility of products before mixing.

Do not apply more than 4 ounces of METSULFURON 60EG IVM per acre per year.

Do not use on food or feed crops except as recommended by this label or supplemental labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift.

Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the agency in your State responsible for pesticide regulation.

#### **RESISTANCE**

Biotypes of certain weeds listed on this label are resistant to METSULFURON 60EG IVM and other herbicides with the same mode of action, even at exaggerated application rates. Biotypes are naturally occurring individuals of a species that are identical in appearance but have slightly different genetic compositions; the mode of action of a herbicide is the chemical interaction that interrupts a biological process necessary for plant growth and development.

If weed control is unsatisfactory, it may be necessary to retreat problem areas using a product with a different mode of action, such as postemergence broadleaf and/or grass herbicides.

If resistant weed biotypes such as kochia, prickly lettuce, and Russian thistle are suspected or known to be present, use a tankmix partner with METSULFURON 60EG IVM to help control these biotypes, or use a planned herbicide rotation program where other residual broadleaf herbicides having different modes of action are used.

#### **INTEGRATED PEST MANAGEMENT**

To better manage weed resistance when using METSULFURON 60EG IVM, use a combination of tillage, and tank-mix partners or sequential herbicide applications that have a different mode of action than METSULFURON 60EG IVM, to control escaped weeds. Attempts should be made to prevent weed escapes from going to seed.

Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative herbicide recommendations available in your area.

It is advisable to keep accurate records of pesticides applied to treated areas to help obtain information on the spread and dispersal of resistant biotypes.

#### AGRICULTURAL USE REQUIREMENTS

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

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

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

- Coveralls.
- Shoes plus socks.

Chemical-resistant gloves made of any waterproof material.

#### CONIFER PLANTATIONS

##### Application Information

METSULFURON 60EG IVM is recommended to control many species of weeds and deciduous trees on sites where conifers are growing or are to be planted. This product can be applied by ground equipment or by air (helicopter only). Refer to the "Weeds Controlled" and "Brush Species Controlled" for a listing of susceptible species.

##### Application Timing

Apply METSULFURON 60EG IVM when weeds have emerged or after undesirable hardwoods have broken winter dormancy and have reached the point of full leaf expansion.

##### Conifer Site Preparation

##### Application Before Transplanting

After consulting the "Weeds Controlled" and "Brush Species Controlled" tables, apply the rates of METSULFURON 60EG IVM recommended for the most difficult to control species on the site.

**Southeast** - Apply up to 4 oz per acre for loblolly and slash. Transplant the following planting season.

**Northeast and Lake States** - Apply up to 2 oz per acre for red pine. Transplant the following planting season.

**West** - Apply up to 2 oz per acre for Douglas Fir, Sitka Spruce, Western Red Cedar, Western Hemlock, Ponderosa Pine, and Grand Fir in the Coast Range and western slope of the Cascades in Oregon and Washington. These conifer species listed can be planted anytime after application. Other conifer species can be planted providing the user has prior experience indicating acceptable tolerance to METSULFURON 60 EG IVM soil residues. Without prior experience, it is recommended that other species be planted on a small scale to determine selectivity before large-scale plantings are made as unacceptable injury may occur. Micro Flo will not assume responsibility for injury to any conifer species not listed on this label.

##### Tank Mix Combinations

For broader spectrum control the following products are recommended in combination with METSULFURON 60EG IVM.

##### Accord<sup>2</sup>

Tank mix 1 to 2 ounces of METSULFURON 60EG IVM with 2 to 10 quarts of Accord per acre. Refer to the product container for a list of species controlled.

**Arsenal Applicator's Concentrate<sup>1</sup>**

Tank mix 1 to 2 ounces of METSULFURON 60EG IVM with 10 to 24 fluid ounces of Arsenal Applicator's Concentrate per acre. Loblolly and slash pines may be transplanted the planting season following application. The combination will control ash, black gum, cherry, hawthorn, honeysuckle, hophornbeam, persimmon, oaks (red, white and water), sassafras, sweetgum, Vaccinium species, while suppressing blackberry, dogwood, elms, myrtle dahoon, hickories, and red maple.

**Accord<sup>2</sup> + Arsenal Applicators Concentrate<sup>1</sup>**

Tank mix 1/2 to 1 ounce of METSULFURON 60EG IVM with 16 to 64 fluid ounces of Accord and 10 to 12 fluid ounces of Arsenal Applicator's Concentrate per acre. Slash and loblolly pines can be transplanted the next planting season following application. The combination controls cherry, dogwood, elms, oaks (red and water), persimmon, sassafras, sweetgum and suppresses hickory.

**VELPAR<sup>®</sup> L or VELPAR DF<sup>®</sup>**

Tank mix 1 to 2 ounces of METSULFURON 60EG IVM per acre with VELPAR L or VELPAR DF at the recommended rates on the container for various soil textures. Loblolly and slash pines can be transplanted the next planting season following application. Refer to the product container for a list of species controlled.

**OUST<sup>®</sup>**

Tank mix 1/2 to 1 1/2 ounces of METSULFURON 60EG IVM with 2 to 3 ounces of OUST per acre for herbaceous weed control. Refer to the product container and the "Weeds Controlled" section of this label for a listing of the weeds controlled. Loblolly and slash pines can be transplanted the next planting season following application.

Tank mix 2 ounces of METSULFURON 60EG IVM with 3 ounces of OUST per acre for herbaceous weed control and early spring suppression of bull thistle and Canada thistle in the Coast Range and western slope of the Cascade Mountains. Douglas fir can be transplanted at least 90 days following application.

**Release****Hardwood Control and Suppression**

METSULFURON 60EG IVM is recommended for over-the-top application of established slash and loblolly pine to control the species listed in "Weeds Controlled" and "Brush Species Controlled" section of this label. Make application of 1 to 4 ounces per acre to control the species indicated, including kudzu.

**Tank Mix Combinations**

The following products are recommended in combination with METSULFURON 60EG IVM for broader spectrum control.

**Arsenal Applicator's Concentrate<sup>1</sup>**

Tank mix 1 to 2 ounces of METSULFURON 60EG IVM with 8 to 16 fluid ounces of Arsenal Applicator's Concentrate per acre can be applied to loblolly pine. Refer to the Arsenal Applicator's Concentrate label regarding the use of surfactants and the appropriate application timing with respect to the age and development stage of the pines. The combination controls ash, black gum, cherry, hawthorn, honeysuckle, hophornbeam, oaks (red, white and water), sassafras, sweetgum, Vaccinium species, and suppresses blackberry, dogwood, elms, myrtle dahoon, hickories, persimmon, and red maple.

**VELPAR<sup>®</sup> L or VELPAR<sup>®</sup> DF**

Tank mix 1 to 2 ounces of METSULFURON 60EG IVM with VELPAR<sup>R</sup> L or VELPAR<sup>R</sup> DF at the recommended rates on the container for various soil textures. This combination can be applied to loblolly and slash pines.

**Release****Herbaceous Weed Control**

METSULFURON 60EG IVM can be applied to transplanted loblolly and slash pine for the control of herbaceous competition. Consult the "Weeds Controlled" for a listing of the susceptible species and recommended application rates. Best results are obtained when METSULFURON 60EG IVM is applied just before weed emergence until shortly after weed emergence.

**Tank Mix Combinations**

The following products are recommended in combination with METSULFURON 60EG IVM for broader spectrum control.

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#### **Arsenal Applicators Concentrate<sup>1</sup>**

Tank mix 1/2 to 1 ounce of METSULFURON 60EG IVM with 4 fluid ounces of Arsenal Applicators Concentrate per acre. This tank mix can be used on loblolly pine.

#### **OUST®**

Tank mix 1/2 to 1 1/2 ounces of METSULFURON 60EG IVM with 2 to 3 ounces of OUST per acre. To obtain best results make application of METSULFURON 60EG IVM just before weed emergence until shortly after weed emergence. This tank mix can be used on loblolly and slash pine.

#### **VELPAR® L or VELPAR® DF**

Tank mix 1/2 to 1 ounce of METSULFURON 60EG IVM with VELPAR L or VELPAR DF at the recommended rates on the container for various soil textures. This combination can be applied to loblolly and slash pines.

#### **IMPORTANT PRECAUTIONS**

##### **CONIFER PLANTATIONS ONLY**

- Applications of METSULFURON 60EG IVM made to conifers that are suffering from loss of vigor caused by insects, diseases, drought, winter damage, animal damage, excessive soil moisture, planting shock, or other stresses may injure or kill the trees.
- Applications of METSULFURON 60EG IVM made for herbaceous release should only be made after adequate rainfall has closed the planting slit and settled the soil around the roots following transplanting.
- Do not apply METSULFURON 60EG IVM to conifers grown as ornamentals.
- METSULFURON 60EG IVM applications can result in damage and mortality to other species of conifers when they are present on sites with those listed in the preceding recommendations for conifer plantations.

#### **HARDWOOD PLANTATIONS**

##### **Application Information**

METSULFURON 60EG IVM is recommended at rates up to 2 ounces per acre for the control of many weed species on sites where yellow poplar is growing or is to be planted and on sites where red alder is to be planted. Application can be made by ground equipment or by air (helicopter only). Refer to the "Weeds Controlled" sections of this label for a listing of susceptible species.

##### **Application Timing**

METSULFURON 60EG IVM can be applied as a site preparation treatment prior to planting red alder or yellow poplar. As a prior to planting, site preparation treatment for red alder, METUFUSLURON 60 EG IVM can be tank mixed with other herbicides labeled for this use.

METSUFULFURON 60 EG IVM can also be applied over-the-top of planted seedlings after the soil has settled around the root systems but before the seedlings have broken dormancy (prior to bud break).

##### **Release**

##### **Herbaceous Weed Control**

METSULFURON 60EG IVM can be applied to yellow poplar for the control of herbaceous competition. Consult the "Weeds Controlled" for a listing of the susceptible species and recommended application rates. To obtain best results make application of METSULFURON 60EG IVM just before weed emergence until shortly after weed emergence.

##### **Tank Mix Combinations**

Tank mix 1/2 ounce of METSULFURON 60EG IVM with 4 to 6 pints of VELPAR L as recommended on the package label for "RELEASE-HERBACEOUS WEED CONTROL" in pine plantations in the eastern U.S. Follow the VELPAR L label recommendations regarding altering the application rate by soil texture.

##### **IMPORTANT PRECAUTIONS - HARDWOOD PLANTATIONS ONLY**

- Application of VELPAR<sup>R</sup> L and METSULFURON 60EG IVM made to yellow poplar that are suffering from loss of vigor caused by insects, disease, drought, winter damage, animal damage, excessive soil moisture, planting shock or other stresses may injure or kill the seedlings.

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- Applications of METSULFURON 60EG IVM made for release should only be made after adequate rainfall has closed the planting slit and settled the soil around the roots following transplanting.
- The use of surfactant **is not** recommended for applications made over the tops of trees.
- Careful consideration must be given by an experienced and knowledgeable forester to match the requirements of yellow poplar and/or red alder to the conditions of the site. Treatment of yellow poplar and/or red alder planted on a site inadequate to meet its requirements can injure or kill the seedlings.

#### NON-AGRICULTURAL USES

The requirements in this box apply to uses of 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.

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

Do not enter or allow unprotected persons to enter treated area until sprays have dried.

#### WEEDS CONTROLLED

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

Annual sowthistle  
Aster  
Bahagrass  
Beebalm  
Bittercress  
Bitter sneezeweed  
Blackeyed-susan  
Blue mustard  
Bur buttercup  
Chicory  
Clover  
Cocklebur  
Common chickweed  
Common groundsel  
Common purslane  
Common yarrow  
Conical catchfly  
Corn cockle  
Cow cockle  
Crown vetch  
Dandelion  
Dogfennel  
False chamomile  
Fiddleneck tarweed  
Field pennycress  
Flixweed

Goldenrod  
Lambsquarters  
Marestail  
Maxmillion sunflower  
Miners lettuce  
Pennsylvania smartweed  
Plains coreopsis  
Plantain  
Redroot pigweed  
Redstem filaree  
Rough fleabane  
Shepherd's purse  
Silky crazyweed (locoweed)  
Smallseed falseflax  
Smooth pigweed  
Sweet clover  
Tansymustard  
Treacle mustard  
Tumble mustard  
Wild carrot  
Wild garlic  
Wild lettuce  
Wild mustard  
Wooly croton  
Wood sorrel  
Yankeweed

##### 1/2 to 1 ounce per acre

Blackberry  
Black henbane  
Broom snakeweed\*

Buckhorn Plantain  
Common crupina  
Common sunflower

Curly dock  
 Dewberry  
 Dyer's woad  
 Gorse  
 Halogeton  
 Henbit  
 Honeysuckle  
 Multiflora rose and other  
 Wild roses

Musk thistle\*\*\*  
 Plumeless thistle  
 Prostrate knotweed  
 Rosering gaillardia  
 Seaside arrowgrass  
 Sericea lespedeza  
 Teasel  
 Wild caraway

#### 1 to 2 ounces per acre

Bull thistle  
 Common mullein  
 Common tansy  
 Field bindweed\*\*  
 Gumweed  
 Houndstongue  
 Perennial pepperweed  
 Poison hemlock

Purple loosestrife  
 Scotch thistle  
 Scouringrush  
 Salsify  
 Snowberry  
 St. Johnswort  
 Western salsify  
 Whitetop (hoary cress)

#### 1 1/2 to 2 ounces per acre

Canada thistle\*\*  
 Dalmation toadflax\*\*  
 Duncceap larkspur

Russian knapweed\*\*  
 Tall larkspur  
 Yellow toadflax\*\*

#### 3 to 4 ounces per acre

Kudzu

\* Apply fall through spring.

\*\* Suppression, which is a visual reduction in weed competition (reduced population or vigor) as compared to untreated areas. Make application as a full coverage spray for best performance.

\*\*\* Certain biotypes of musk thistle are more sensitive to METSULFURON 60EG IVM and may be controlled with rates of 1/4 to 1/2 ounce per acre. Treatments of METSULFURON 60EG IVM can be applied from rosette through bloom stages of development.

#### **Tank Mix Combination**

The following tank mixes are recommended for broader spectrum control and for use on certain biotypes of broadleaf weeds which may be resistant to METSULFURON 60EG IVM and herbicides with the same mode of action,.

#### **DICAMBA + 2,4-D**

Combine 1/2 to 1 ounce of METSULFURON 60EG IVM with 8 fluid ounces of dicamba and 16 fluid ounces of 2,4-D for the control of kochia.

Combine 1/2 ounce of METSULFURON 60EG IVM with 8 fluid ounces of dicamba and 16 fluid ounces of 2,4-D for the control of spotted knapweed.

Combine 1 ounce of METSULFURON 60EG IVM with 8 fluid ounces of dicamba and 16 fluid ounces of 2,4-D for the suppression of rush skeletonweed.

#### **NONCROP (INDUSTRIAL) SITES**

##### **Application Information**



METSULFURON 60EG IVM is recommended for use for general weed and brush control on non-crop, industrial sites such as airports, military installations, fence rows, roadsides and associated rights-of-way, petroleum tank farms, pipeline and utility rights-of-way, pumping stations, railroads, storage areas, plant sites including governmental and private lands. It is also recommended for the control of certain noxious and troublesome weeds.

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

METSULFURON 60EG IVM can be applied in tank mixture with other herbicides labeled for use on non-crop sites. Read the labels and follow all directions and restrictions on each label.

#### Application Timing

For best results, METSULFURON 60EG IVM should be applied postemergence to young, actively growing weeds.

Applications can be made at any time of the year, except when the ground is frozen.

#### GRASS REPLANT INTERVALS

Following an application of METSULFURON 60EG IVM to non-crop areas, the treated sites can be replanted with various species of grasses at the intervals recommended below.

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

<u>SPECIES</u>	<u>METSULFURON 60EG IVM Rate</u> <u>oz/a</u>	<u>Replant Interval</u> <u>(months)</u>
Brome, Meadow	1/2-1	2
	1-2	3
Brome, Smooth	1/2-1	2
	1-2	4
Fescue, Alta	1/2-1	2
	1-2	4
Fescue, Red	1/2-1	2
	1-2	4
Fescue, Sheep	1/2-1	1
	1-2	4
Foxtail, Meadow	1/2-1	2
	1-2	4
Green Needlegrass	1/2-2	1
Orchardgrass	1/2-1	2
	1-2	4
Russian wild rye	1/2	1
	1	2
	2	3
Switchgrass	1/2-1	1
	1-2	3
Timothy	1/2-1	2
	1-2	4
Wheatgrass, Western	1/2-1	2
	1-2	3

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

<u>SPECIES</u>	<u>METSULFURON 60EG IVM Rate</u> <u>oz/a</u>	<u>Replant Interval</u> <u>(months)</u>
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Alkali Sacaton	1/2-1	1
	1-2	3
Bluestem, Big	1/2-2	3
Brome, Mountain	1/2-1	1
	1-2	2
Gamma, Blue	1/2-2	1
Gamma, Sideoats	1/2	2
	>1/2	>3
Switchgrass	1/2	2
	>1/2	>3
Wheatgrass, Thickspike	1/2-2	1
Wheatgrass, Western	1/2-1	2
	1-2	3

The recommended intervals are for applications made in the Spring to early Summer. Because METSULFURON 60EG IVM degradation is slowed by cold or frozen soils, applications made the late Summer or Fall should consider the intervals as beginning in the Spring following treatment.

Testing has indicated that there is considerable variation in response among the species of grasses when seeded into areas treated with METSULFURON 60EG IVM. If species other than those listed above are to be planted into areas treated with METSULFURON 60EG IVM, a field bioassay should be performed, or previous experience may be used to determine the feasibility of replanting treated sites.

#### **TURF, INDUSTRIAL (UNIMPROVED ONLY)**

##### **Application Information**

METSULFURON 60EG IVM is recommended for selective weed control in unimproved industrial turf where certain grasses are well established and desired as ground cover. METSULFURON 60EG IVM is also recommended for the control certain noxious and troublesome weeds in turf.

In addition to conventional spray equipment, METSULFURON 60EG IVM can also be applied with invert emulsion equipment. When using an invert emulsion, mix the prescribed rate of METSULFURON 60EG IVM in the water phase.

Consult the "Weeds Controlled" table to determine which weeds will be controlled by the following recommendations.

**Fescue and Bluegrass** - Apply 1/4 to 1/2 ounce of METSULFURON 60EG IVM per acre.

**Crested Wheatgrass and Smooth Brome** - Apply 1/4 to 1 ounce of METSULFURON 60EG IVM per acre.

**Bermudagrass** - Apply 1/4 to 2 ounces of METSULFURON 60EG IVM per acre.

##### **Application Timing**

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

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

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

##### **Application Information**

METSULFURON 60EG IVM is recommended for growth suppression and seedhead inhibition in well established fescue and bluegrass turf at the use rate of 1/4 to 1/2 ounce per acre.

##### **Tank Mix Combination**

METSULFURON 60EG IVM can be tank mixed with Embark<sup>3</sup> for improved performance in the regulation of growth and seedhead suppression. Tank mix 1/4 to 1/2 ounce of METSULFURON 60EG IVM with 1/8 to 1/4 pint of Embark.

**Application Timing**

Apply after at least 2 to 3 inches of new growth has emerged until the appearance of the seed stalk.

**IMPORTANT PRECAUTIONS - INDUSTRIAL TURF ONLY**

- An application of METSULFURON 60EG IVM may cause temporary discoloration (chlorosis) of the grasses. Use the lower recommended rates for minimum discoloration.
- With fescue and bluegrass, sequential applications made during the same or consecutive growth periods (i.e. spring and fall) may result in excessive injury to turf.
- Excessive injury may result when METSULFURON 60EG IVM is applied to turf that is under stress from drought, insects, disease, cold temperatures (winter injury) or poor fertility.
- METSULFURON 60EG IVM is not recommended for use on bahiagrass.

**NATIVE GRASSES**

METSULFURON 60EG IVM is recommended for weed control and suppression in the establishment and maintenance of native grasses. It can be used where blue grama, bluestems (big, little, plains, sand, ww spar) bromegrasses (meadow), buffalograss, green sprangletop, indiangrass, kleingrass, lovegrasses (atherstone, sand, weeping, wilman), orchardgrass, sideoats grama, switchgrass (blackwell), wheatgrass (bluebunch, intermediate, pubescent siberian, slender, streamband, tall, thickspike, western), and russian wildrye are established. Application can also be applied over these species in the seedling stage, except for orchardgrass and russian wildrye.

**Application Information**

Make application of METSULFURON 60EG IVM at the rate of 1/10 ounce per acre for the control and suppression\* of bur buttercup (testiculate), common purslane, common sunflower\*, cutleaf eveningprimrose\*, flixweed\*, lambsquarters\* (common and slimleaf), maretail\*, pigweed (redroot and tumble), snow speedwell, tansymustard\* and tumble mustard (Jim Hill mustard).

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

**Application Timings**

For established grass, make application when weeds are in the seedling stage.

For grasses in the seedling stage, make application preplant or preemergence, where the soil (seed bed) has been cultivated.

**BRUSH CONTROL****Application Information**

METSULFURON 60EG IVM is recommended for the control of undesirable brush growing in non-crop areas.

Application can be made by air, high volume ground application, low volume ground application and ultra-low volume ground application. Except as noted for multiflora rose, METSULFURON 60EG IVM should be applied as a spray to the foliage.

The application volume required will vary with the height and density of the brush and the application equipment used.

Generally, aerial applications will require 15 to 25 gallons of water per acre; high volume ground application will require 100 to 400 gallons of water per acre; low volume ground application will require 20 to 50 gallons of water per acre; and ultra-low volume ground application will require 10 to 20 gallons of water per acre.

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

**BRUSH SPECIES CONTROLLED**

High Volume

Broadcast

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<u>SPECIES</u>	<u>METSULFURON 60EG IVM</u>	<u>METSULFURON 60EG IVM</u>
	<u>Rate oz/100 gal</u>	<u>Rate oz/a</u>
Ash	1-2	1-3
Aspen	1-2	1-3
Black locust	1-2	1-3
Blackberry	1-2	1-3
Camelthorn	1-2	1-3
Cherry	1-2	1-3
Cottonwood	1-2	2-3
Eastern red cedar	1-2	2-3
Elder	1-2	2-3
Elm	1-2	1-3
Firs	3	1-2
Hawthorn	1-2	1-3
Honeysuckle	1-2	1/2-1
Mulberry	1-2	2-3
Multiflora rose	1-2	1-3
Muscadine (wild grape)	1-2	2-3
Oaks	1-2	1-3
Ocean spray (Holodiscus)	1-2	2-3
Osage orange	1-2	2-3
Red maple	1-2	2-3
Salmonberry	1/2-1	1-3
Snowberry	1/2-1	1-3
Spruce (black and white)	3	2-3
Thimbleberry	1/2-1	1-3
Tulip tree	1/2-1	1-3
Wild roses	1/2-1	1-3
Willow	1/2-1	1-3

For low volume and ultra-low volume ground applications, mix 4 to 8 ounces of METSULFURON 60EG IVM per 100 gallons of spray solution.

#### Application Timing

Apply a foliar application of the recommended rate of METSULFURON 60EG IVM during the period from full leaf expansion in the spring until the development of full fall coloration on deciduous species to be controlled. Coniferous species may be treated at anytime during the growing season.

#### Tank Mix Combinations

##### Accord<sup>2</sup>

Tank mix the prescribed rate of METSULFURON 60EG IVM with the rate of Accord indicated for the various application methods on the Accord label, after consulting the "Brush Species Controlled" table. Refer to the Accord label for list of species controlled.

##### Arsenal<sup>1</sup> Herbicide

Combine 1 to 2 ounces of METSULFURON 60EG IVM with 1 to 4 pints of Arsenal Herbicide per acre and make application as a broadcast spray. Use a minimum of 15 gallons per acre spray volume for aerial applications. This combination controls black gum, hophornbeam, sassafras, sweetgum, Vaccinium species, dogwood, myrtle dahoon, hickories, and persimmon, in addition to species listed above controlled by METSULFURON 60EG IVM.

##### Garlon<sup>4</sup> 3A or Garlon 4

After consulting the "Brush Species Controlled" table, tank mix the prescribed rate of METSULFURON 60EG IVM with the rate of Garlon indicated for the various application methods on the Garlon label. Refer to the Garlon label for list of species controlled.

**KRENITE<sup>R</sup> S**

Tank mix the prescribed rate of METSULFURON 60EG IVM with the rate of KRENITE<sup>R</sup> S indicated for the various application methods on the KRENITE<sup>R</sup> S label, after consulting the "Brush Species Controlled" table. Refer to the KRENITE<sup>R</sup> S label for list of species controlled.

**Tordon K<sup>5</sup>**

After consulting the "Brush Species Controlled" table, tank mix the prescribed rate of METSULFURON 60EG IVM with the rate of Tordon K indicated for the various application methods on the Tordon K label. Refer to the Tordon K label for list of species controlled.

**Tordon K<sup>5</sup> + Arsenal<sup>1</sup> Herbicide**

Mix 1 to 1 1/2 ounce of METSULFURON 60EG IVM with 2 to 8 fluid ounces of Arsenal and 1 to 2 pints of Tordon K per 100 gallons of water. Apply as a high volume spray. This tank mix controls cherry, elms, box elder, maples, hackberry, redbud, ash, oaks (including shingle oak), black locust and sassafras.

\*Tordon K is a restricted use pesticide.

**Spotgun Basal Soil Treatment**

For control of multiflora rose, prepare a spray suspension of METSULFURON 60EG IVM by mixing 1 ounce per gallon of water. Mix vigorously until the METSULFURON 60EG IVM is dispersed and agitate periodically while applying the spray suspension.

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

Applications should be made from early spring to summer.

**IMPORTANT PRECAUTIONS - NON-CROP BRUSH ONLY**

When using tank mixtures of METSULFURON 60EG IVM with companion herbicides, read and follow all use instructions, application rates, warnings and precautions appearing on the labels. Always follow the most restrictive label instructions for each of the herbicides used.

**SPRAY EQUIPMENT**

Following an METSULFURON 60EG IVM application, do not use the sprayer or mixing equipment for application to agricultural crops, except that it may be used to treat pasture, range and wheat. This is extremely important as low rates of METSULFURON 60EG IVM can kill or severely injure most agricultural crops.

The selected sprayer should be equipped with an agitation system to keep METSULFURON 60EG IVM suspended in the spray tank. Use a sufficient volume of water to thoroughly cover the foliage of undesirable weeds, generally 10 to 40 gallons per acre. Select a spray volume and delivery system that will deliver a uniform spray pattern. Be sure the sprayer is calibrated before use. Avoid overlapping and shut off spray booms while starting, turning, slowing or stopping to avoid injury to desired plants.

Refer to the brush control section of this label for information unique to that particular use.

**MIXING INSTRUCTIONS**

1. Fill tank 1/4 to 1/3 full of water.
2. Agitate while adding the required amount of METSULFURON 60EG IVM.
3. Continue agitation until the METSULFURON 60EG IVM is fully dispersed, at least 5 minutes.
4. Once the METSULFURON 60EG IVM is fully dispersed, maintain agitation and continue filling tank with water. METSULFURON 60EG IVM should be thoroughly mixed with water before adding any other material.

5. As the tank is filling, add tank mix partners (if desired) then add the necessary volume of nonionic surfactant. Always add surfactant last.
6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
7. METSULFURON 60EG IVM spray preparations are stable if they are pH neutral or alkaline and stored at or below 100°F.
8. If METSULFURON 60EG IVM and a tank mix partner are to be applied in multiple loads, pre-slurry the METSULFURON 60EG IVM in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of the METSULFURON 60EG IVM.

#### **SPRAYER CLEANUP**

Spray equipment must be cleaned before METSULFURON 60EG IVM is sprayed. Follow the cleanup procedures specified on the labels of previously applied products. If no directions are provided, follow the six steps outlined below.

#### **At the End of the Day**

When multiple loads of METSULFURON 60EG IVM herbicide are applied, it is recommended that at the end of each day of spraying, the interior of the tank be rinsed with fresh water and then partially refilled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits that can accumulate in the application equipment.

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gal of household ammonia\* (contains 3% active) for every 100 gal of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 min. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. If only ammonia is used as a cleaner, the rinsate solution may be applied back to the crop(s) recommended on this label. Do not exceed the maximum labeled use rate. If other cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

\*Equivalent amounts of an alternate - strength ammonia solution or a MICRO FLO-approved cleaner can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions. Consult your agricultural dealer, applicator, or MICRO FLO representative for a listing of approved cleaners.

#### **Notes:**

1. **Attention:** 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 prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
3. When METSULFURON 60EG IVM is tank mixed with other pesticides, all required cleanout procedures should be examined and the most rigorous procedure should be followed.

4. In addition to this cleanout procedure, all pre-cleanout guidelines on subsequently applied products should be followed as per the individual labels.

### **SPRAY DRIFT MANAGEMENT**

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

### **AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.**

#### **IMPORTANCE OF DROPLET SIZE**

The most effective 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 WILL 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** - The boom length should not exceed 3/4 of the wing or rotor length - longer booms increase drift potential.

**Application Height** - Application more than 10 ft above the canopy increases the potential for spray drift.

#### **BOOM HEIGHT**

Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, 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 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.

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

#### TEMPERATURE AND HUMIDITY

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

#### TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature 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 an 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.

#### USE PRECAUTIONS

Injury to or loss of desirable tree 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 wash or moved into contact with their roots.
- Treatment of powdery, dry soil or light, sandy soil when there is little likelihood of rainfall soon after treatment may result in off target movement and possible damage to susceptible crops when soil particles are moved by wind or water. Injury to crops may result if treated soil is washed, blown, or moved onto land used to produce crops. Exposure to METSULFURON 60EG IVM 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 METSULFURON 60EG IVM. Do not treat frozen soil. Treated soil should be left undisturbed to reduce the potential for METSULFURON 60EG IVM movement by soil erosion due to wind or water.
- Do not use on lawns, walks, driveways, tennis courts or similar areas.
- Do not apply through any type of irrigation system.
- Do not use the equipment used to mix or apply METSULFURON 60EG IVM on crops (except pasture, range and wheat). The mixing and application equipment may be used for noncrop areas and conifer plantations only.
- When used as directed, there is no grazing restriction for use rates of 1 2/3 ounce per acre and less. At use rates of 1 2/3 to 3 1/3 ounce per acre forage grasses may be cut for hay, fodder or green forage and fed to livestock, including lactating animals, 3 days after treatment.
- Do not use this product in the following counties of Colorado: Saguache, Rio Grande, Alamosa, Costilla and Conejos.
- Do not use this product in California.

#### STORAGE AND DISPOSAL

**Pesticide Storage:** Store product in original container. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place.



**Product Disposal:** Do not contaminate water, food or feed by disposal or cleaning of equipment. 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 and then offer for recycling or reconditioning, or puncture and dispose of in a sanitary land fill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

1 Arsenal is a registered trademark of American Cyanamid Company.

2 Accord is a registered trademark of Monsanto Company.

3 Embark is a registered trademark of PBI Gordon Corporation.

4 Garlon is a registered trademark of Dow Agrosience.

5 Tordon is a registered trademark of Dow Agrosience.

#### CONDITIONS OF SALE AND WARRANTY

The Directions For Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of MICRO FLO COMPANY LLC ("Micro Flo") or the Seller. All such risks shall be assumed by the Buyer. Micro Flo warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use, subject to the inherent risks, referred to above. MICRO FLO MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL MICRO FLO OR THE SELLER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. Micro Flo and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing Conditions of Sale and Warranty which may be varied only by agreement in writing signed by a duly authorized representative of Micro Flo.