# Lock Down SC

# Herbicide

FOR USE TO MAINTAIN BARE GROUND NON-CROP AREAS, †CONIFER AND POPLAR RE-FORESTATION SITES

# **ACTIVE INGREDIENT:**

Flumioxazin*	41.4%
OTHER INGREDIENTS:	58.6%
TOTAL:	100.0%

\*2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-

tetrahydro-1H-isoindole-1,3(2H)-dione

Lock Down SC contains 4 pounds flumioxazin per gallon.

†Not for use in CA

Shake Well, Agitate or Recirculate Before Use

# **KEEP OUT OF REACH OF CHILDREN**

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

SEE NEXT PAGE FOR ADDITIONAL PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300 For Medical Emergencies Only, Call (877) 325-1840

EPA Reg. No. 71368-114

Manufactured for Nufarm Inc. 11901 S. Austin Avenue Alsip, IL 60803





Net Contents
2.5 Gal.
(9.46 L)
Nonrefillable Container

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing spray mist. Avoid contact with skin, eyes or clothing.

#### HOT LINE NUMBER

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

You may also contact 1-877-325-1840 for emergency medical treatment information.

# PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some of the materials that are chemical-resistant to this product are listed below.

# Applicators and other handlers must wear:

- · long-sleeved shirt and long pants
- · chemical-resistant gloves made of any waterproof material
- · shoes and socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If there are 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.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

# **ENVIRONMENTAL HAZARDS**

If not used in accordance with directions on the label, this product is toxic to non-target plants and aquatic invertebrates. For terrestrial uses: Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to non-target plants and aquatic organisms in water adjacent to treated areas. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

This pesticide is toxic to plants. Use strictly in accordance with the drift and run-off precautions on this label in order to minimize offsite exposures.

Under some conditions this product may have a potential to run off to surface water or adjacent land. Where possible, use methods which reduce soil erosion, including no till, limited till and contour plowing; these methods also reduce pesticide run-off. Use of vegetation filter strips along rivers, creeks, streams, wetlands or on the downhill side of fields where run-off could occur will minimize water run-off. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewace treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

#### PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

#### **DIRECTIONS FOR USE**

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

Read the entire label before using this product. Use strictly in accordance with label precautionary statements and directions, and with applicable state and federal regulations.

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

# 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 (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural crops on farms, forests, nurseries, or greenhouses.

Keep all unprotected persons out of operating areas, or vicinity where there may be drift.

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

#### RISKS OF USING THIS PRODUCT

The Buyer and User (referred to collectively herein as "Buyer") of this product must be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include, but are not limited to, injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product. injury caused by drift,' and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application, (or a combination of such factors) all of which are factors beyond the control of Nufarm. The Buyer must be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage, or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest. If the Buyer chooses not to accept these risks, THEN DO NOT APPLY THIS PRODUCT. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND TO THE FULLEST EXTENT ALLOWED BY LAW, AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER. Nufarm shall not be responsible for losses or damages (including, but not limited to, loss of yield, increased expenses of farming the crop or such incidental, consequential or special damages that may be claimed) resulting from use of this product in any manner not set forth on the label. Buyer assumes all risks associated with the use of this product in any manner or under conditions not specifically directed or approved on the label.

See also WARRANTY DISCLAIMER and LIMITATION OF LIABILITY sections of the label for additional information.

#### TANK MIXES

NOTICE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor, to the extent allowed by applicable law.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

# PRODUCT INFORMATION

This product is a selective herbicide to maintain bare ground non-crop areas when used in accordance with this label. This product is effective as a preemergence and/or postemergence herbicide for control of selected grass and broadleaf weeds.

This product controls weeds by inhibiting protoporphyrinogen oxidase, an essential enzyme required by plants for chlorophyll biosynthesis. Seedling weeds are controlled preemergence when exposed to sunlight following contact with the soil applied herbicide.

#### USE RESTRICTIONS

- Do not apply more than 12 fl oz (0.38 lb ai) of this product per acre per application.
- Do not apply more than 24 fl oz (0.75 lb ai) of this product per acre per year.
- Do not apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- Do not apply when weather conditions favor spray drift from treated areas.
- Do not incorporate into soil after application.
- Do not apply this product through any type of irrigation system.
- Do not apply to moist or wet desirable plant foliage.
- Do not apply within 300 feet of non-dormant pome or stone fruit crops.

#### **USE PRECAUTIONS**

Treatment of powdery, dry soil or light sandy soil, or light sandy soil when there is little to no likelihood of rainfall soon after may result
in off target movement and possible damage to actively growing susceptible crops when soil particles are moved by wind or water. Do
not apply when these soil and environmental conditions are present.

#### WEED RESISTANCE MANAGEMENT

This product is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 14 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed. To delay herbicide resistance take one or more of the following steps:

- Rotate this product or other Group 14 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to
  herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seedling
  rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or
  varieties) and other management practices.

- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective and to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of action.
- Contact your local sales representative, agricultural dealer, consultant, local extension specialist, applicator, crop advisor, and/or
  appropriate state agricultural extension service representative for additional pesticide resistance-management and/or integrated weedmanagement recommendations for specific crops and weed biotypes.
- Report any incidence of non-performance of this product against a particular weed species to your local sales representative or agricultural dealer.

# **BEST MANAGEMENT PRACTICES**

- Plant into weed-free fields and keep fields as weed-free as possible.
- Use a diversified approach toward weed management. Whenever possible incorporate multiple weed-control practices such as mechanical cultivation, biological management practices, and crop rotation.
- Fields with difficult to control weeds should be rotated to crops that allow the use of herbicides with alternative mechanisms of action or different management practices.
- Do not allow weed escapes to produce seeds, roots or tubers. Manage weed seeds at harvest and post-harvest to prevent a buildup
  of the weed seed-bank.
- Prevent field-to-field and within-field movement of weed seed or vegetative propagules.
- Prevent an influx of weeds into the field by managing field borders.
- Identify weeds present in the field through scouting and field history and understand their biology. The weed-control program should consider all of the weeds present.
- Difficult to control weeds may require sequential applications of herbicides with differing mechanisms of action.
- Apply this herbicide at the correct timing and rate needed to control the most difficult weed in the field.
- Use a broad spectrum soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed-control program. Do not use more than two applications of this or any other herbicide with the same mechanism of action within a single growing season unless mixed with an herbicide with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds.
- If resistance is suspected, treat weed escapes with an herbicide with a different MOA or use non-chemical methods to remove escapes.

# PREEMERGENCE APPLICATION

Make the preemergence application of this product prior to weed emergence. Moisture is necessary to activate this product for residual weed control. Moisture is needed to move this product into the soil for preemergence weed control. Dry weather following application of this product may reduce effectiveness.

# POSTEMERGENCE APPLICATION

For best results, apply this product to actively growing weeds. Applying this product under conditions that do not promote active weed growth will reduce herbicide effectiveness.

Do not apply this product when the weeds are under stress due to drought, excessive water and extremes in temperatures or disease. This product is most effective when applied under sunny conditions at temperatures above 65° F.

This product is rainfast one hour after application. Do not make applications if rain is expected within one hour of application or efficacy may be reduced.

# APPLICATION EQUIPMENT

Important: Thoroughly clean spray equipment, including all tanks, hoses, booms, screens and nozzles. Do not use spray equipment used to apply this product to apply other materials to any desirable plant foliage. Equipment with this product's residue remaining in the system may result in crop injury to subsequently treated crops.

#### SPRAYER PREPARATION

Before applying this product, start with clean, well maintained application equipment. Clean the spray tank, as well as all hoses and booms to ensure no residue from the previous spraying operation remains in the sprayer. Some pesticides, including but not limited to the sulfonylurea and phenoxy herbicides, are active at very small amounts and can cause crop injury when applied to susceptible crops. Clean the spray equipment according to the manufacturer's directions for the last product used before the equipment is used to apply this product. If two or more products were tank mixed prior to this product's application, follow the most restrictive cleanup procedure.

#### MIXING INSTRUCTIONS

- 1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
- 2. Agitate solution. Agitation creates a rippling or rolling action on the water surface.
- 3. If tank mixing this product with other labeled herbicides, add water soluble bags first, followed by dry formulations, flowables, emulsifiable concentrates and then solutions. Prepare no more spray mixture than is required for the immediate spray operation.
- 4. Add any required adjuvants.
- 5. Fill spray tank to desired level with water. Continue agitation until all spray solution has been applied.
- 6. Mix only the amount of spray solution that can be applied the day of mixing. Apply this product within 48 hours of mixing.

#### SPRAYER CLEANUP

If spray equipment is dedicated to herbicide applications, the following steps are to clean the spray equipment:

• Completely drain the spray tank and rinse the application equipment thoroughly, including the inside and outside of the tank and all in-line screens.

If spray equipment will be used for purposes other than applying herbicides, it must be thoroughly cleaned following application of this product. The following steps must be used to clean the spray equipment:

- Completely drain the spray tank, rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.
- Fill the spray tank with clean water and flush all hoses, booms, screens and nozzles,
- Top off tank, add suitable commercial spray tank cleaning material, following label directions, or add 1 gallon of 3% household ammonia for every 100 gallons of water, circulate through sprayer for 5 minutes, and then flush all hoses, booms, screens and nozzles for a minimum of 15 minutes.
- Drain tank completely.
- Add enough clean water to the spray tank to allow all hoses, booms, screens and nozzles to be flushed for 2 minutes.
- Remove all nozzles and screens and rinse them with clean water.

#### SPRAY DRIFT MANAGEMENT

Do not apply under circumstances where possible drift to unprotected persons or to food, forage or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption can occur.

- Use the largest droplet size consistent with acceptable efficacy. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible and by avoiding excessive spray boom pressure. For ground boom and aerial applications, use medium or coarser spray nozzles according to ASAE 572 definition for standard nozzles or a volume mean diameter (VMD) of 300 microns or greater for spinning atomizer nozzles.
- Make aerial or ground applications when the wind velocity favors on-target product deposition. Drift potential is lowest between wind speeds of 2-10 mph. For all non-aerial applications, wind speed must be measured adjacent to the application site on the upwind side. immediately prior to application.
- Do not make aerial or ground applications into areas of temperature inversions. Inversions are characterized by stable air and increasing temperatures with increasing distance above the ground. Mist or fog may indicate the presence of an inversion in humid areas. Where permissible by local regulations, the applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.
- Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of increased spray drift. Avoid spraying during conditions of low humidity and/or high temperatures.
- All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers.
- For ground boom applications, apply with nozzle height at the lowest boom height which provides uniform coverage and reduces exposure to evaporation and wind.

# WEEDS CONTROLLED

When this product is applied preemergence or postemergence at directed rates and weed stages, the following grasses and broadleaf weeds are controlled:

# TABLE 1. WEEDS CONTROLLED BY THIS PRODUCT

COMMON NAME	SCIENTIFIC NAME	
Alyssum, Hoary	Berteroa incana	
Amaranth		
Palmer	Amaranthus palmeri	
Spiny	Amaranthus spinosus	
American Burnweed	Erechetities hieracifolia	
Barnyardgrass*	Echinochloa crus-galli	
Beggarweed, Florida	Desmodium Tortuosum	
Bittercress, Hairy	Cardamine hirsute	
Bluegrass, Annual	Poa annua	
Burclover, California	Medicago Polymorpha	
Carpetweed	Mollugo verticillata	
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#### TABLE 1. WEEDS CONTROLLED BY THIS PRODUCT (continued)

COMMON NAME SCIENTIFIC NAME

Chamberbitter Phyllanthus urinaria

Chickweed Common

Mouseear

Crabgrass Large\* Smooth\*

Southern\* Croton, Tropic Dandelion\*

Dogfennel Doveweed Eclipta

Filaree, Redstem\* Foxtail

Bristly\*
Giant\*
Green\*
Yellow\*
Galinsoga, Hairy

Geranium, Carolina Goosegrass\* Groundsel, Common Groundsel, Tree

Henbit Horseweed\* Indigo, Hairy Ivy, Ground\* Jimsonweed Kochia Kyllinga, Green\* Ladysthumb

Lambsquarters, Common Lovegrass, California\*

Liverwort
Mallow
Common
Little
Venice
Marsh Parsley

Marsh Parsley Mayweed\* Morningglory Entireleaf Ivyleaf

lvyleaf
Red/Scarlet
Smallflower
Tall
Moss

Mulberry Weed Mustard Tumble Wild

Nightshade Black Eastern Black

Hairy Northern Willowherb

Stellaria media Cerastium vulgatum

Digitaria sanguinalis Digitaria ishaemum Digitaria ciliaris

Croton glandulosus var.septentrionalis

Taraxacum officinale
Eupatorium capillifolium
Murdannia nudiflora
Eclipta prostrate
Erodium cicutarium

Setaria verticillata

Setaria faberi Setaria viridis Setaria glauca Galinsoga ciliate Geranium carolinianum Eleusine indica Senecio vulgaris Baccharis halimifolia I amium amplexicaule Conyza Canadensis Indigofera hirsute Glechoma hederacea Datura stramonium Kochia scoparia Kyllinga brevifolia Polygonum persicaria

Malva neglecta Malva parviflora Hibiscus trionum Apium leptophyllum Anthemis cotula

Chenopodium album

Marchantia polymorpha

Eragrostis diffusa

Ipomoea hederacea var.integriuscula

Ipomoea hederacea
Ipomoea coccinea
Jacquemontia tamnifolia
Ipomoea purpurea
Bryum spp.
Fatuoa villosa

Sisymbrium altissimum Brassica kaber

Solanum nigrum Solanum ptycanthum Solanum sarrachoides Epilobium cillatum

(continued)

#### TABLE 1. WEEDS CONTROLLED BY THIS PRODUCT (continued)

COMMON NAME	SCIENTIFIC NAME

Panicum Fall\*

Texas\* Parslev-Peirt

Pearlwort, Birdseye\* Pennycress, Field

Phyllanthus, Longstalked

Pigweed Prostrate Redroot Smooth

Tumble Pineapple-weed\*

Plantain Broadleaf\* Buckhorn\* Poinsettia, Wild Puncturevine

Purslane, Common Pusley, Florida Ragweed

Common Giant Redmaids Redweed Rocket, Yellow Senna, Coffee Sesbania, Hemp

Shepherd's-Purse Sida, Prickly (Teaweed) Signalgrass\*

Smartweed, Pennsylvania Sowthistle, Annual Spiderwort, Tropical

Spurge Petty

Prostrate Spotted

Starbur, Bristly\* Tassle-flower

Thistle

Canada\* Russian Velvetleaf Waterhemp Common

Tall Woodsorrel, Yellow\*

\*Preemergence control only

Panicum dichotomiflorum Panicum texanum Alchemilla arvensis Sagina procumbens

Thlaspi arvense Phyllanthus tenellus

Amaranthus blitoides Amaranthus retroflexus Amaranthus hybridus Amaranthus albus Matricaria matricarioides

Plantago maior Plantago lanceolata Euphorbia heterophylla Tribulus terrestris Portulaça oleracea Richardia scabra

Ambrosia artemisiifolia Ambrosia trifida Calandrinia ciliate Melochia corchorifolia Barbarea vulgaris Cassia occidentalis Sesbania exaltata Capsella bursa-pastoris Sida spinosa Brachiaria platyphylla Polvaonum pensylvanicum Sonchus oleraceus

Euphorbia peplus

Euphorbia humistrata Engelm Euphorbia maculate

Acanthospermum hispidum

Commelina benghalensis

Emilia spp.

Cirsium arvense Salsola iberica Abutilon theophrasti

Amaranthus rudis Amaranthus tuberculatus

Oxalis stricta

# **DIRECTIONS FOR USE**

# TO MAINTAIN BARE GROUND NON-CROP AREAS

This product, when used as directed, can be used for non-selective vegetation control to maintain bare ground non-crop areas that must be kept weed-free. Apply this product only to:

- Bare ground under guard rails, above-ground pipelines, and railroad beds, railroad vards and surrounding greas
- Bare ground in parking and storage areas, plant sites, substations, pumping stations, and tank farms
- · Bare ground areas of airports, brick yards, industrial plant sites, lumber yards, military installations, and storage areas
- · Bare ground around farm buildings, and along ungrazed fence rows, wind breaks and shelter belts
- · Road surfaces, improved roadside areas and gravel shoulders.

Follow all applicable directions as outlined above under Product Information. See Table 1 for a list of broadleaf weeds and grasses controlled by this product.

This product offers residual and postemergence control of susceptible broadleaf and grass weeds as well as additional mode of action to assist in the control of ALS (acetolactate synthase) resistant weeds. The length of residual control is dependent on the rate applied as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase.

#### PREEMERGENCE APPLICATION

Apply 8 to 12 fl oz (0.25 to 0.38 pound ai per acre) of this product per broadcast acre as a preemergence application. Make preemergence (to weed emergence) applications of this product to a weed free soil surface. Preemergence applications of this product must be completed prior to weed emergence. Moisture is necessary to activate this product on soil for residual weed control. Dry weather following application of this product may reduce effectiveness. However, when adequate moisture is received after dry conditions, this product will control susceptible germinating weeds.

# POSTEMERGENCE APPLICATION

Apply 8 to 12 fl oz (0.25 to 0.38 pound ai per acre) of this product per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant or 1 quart per acre crop oil concentrate). The addition of an adjuvant enhances this product activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of this product. Emerged weeds are controlled postemergence with this product, however, translocation of this product within a weed is limited, and control is affected by spray coverage and by the addition of an adjuvant. The most effective postemergence weed control with this product occurs when applied in combination with a surfactant to weeds less than 2 inches in height.

#### SOIL CHARACTERISTICS

Application of this product to soils with high organic matter and/or high clay content may require higher dosages than with soils with low organic matter and/or low clay content. Application to cloddy seedbeds can result in reduced weed control.

# CARRIER VOLUME AND SPRAY PRESSURE

### PREEMERGENCE APPLICATION

To ensure uniform coverage, use 10 to 30 gallons of spray solution per acre. Nozzle selection must meet manufacturer's gallonage and pressure directions for preemergence herbicide application.

#### POSTEMERGENCE APPLICATION

To ensure thorough coverage, use 15 to 30 gallons of spray solution per acre. Use 20 to 30 gallons per acre if dense vegetation or heavy residue is present on the soil surface. Nozzle selection must meet manufacturer's gallonage and pressure directions for postemergence herbicide application.

# **ADDITIVES**

#### POSTEMERGENCE APPLICATION

When applying this product after weed emergence, mix with an agronomically approved adjuvant. Use a crop oil concentrate which contains at least 15% emulsifiers and 80% oil or a non-ionic surfactant containing at least 80% active ingredient when applying this product as part of a postemergence weed control program. Verify mixing compatibility by a jar test before using.

A spray grade nitrogen source (either ammonium sulfate at 2.0 to 2.5 pounds per acre or a 28 to 32% nitrogen solution at 1 to 2 quarts per acre) may be added to the spray mixture along with a crop oil concentrate or non-ionic surfactant to enhance weed control. The addition of a nitrogen source does not replace the need for crop oil concentrate or non-ionic surfactant.

# JAR TEST TO DETERMINE COMPATIBILITY OF ADJUVANTS AND THIS PRODUCT

When using this product and an adjuvant, including in stale seed bed, layby, hooded/shielded or reduced tillage situations, perform a jar test before mixing commercial quantities of this product, when using this product for the first time, when using new adjuvants or when a new water source is being used.

- Add 1 pint of the water to a quart jar. Use water from the same source and temperature as which will be used in the spray tank mixing operation.
- 2. Add 1 milliliter of this product to the quart jar for every 3 fl oz of this product per acre being applied (4 mls if 12 fl oz per acre is the desired rate of this product), gently mix until product goes into suspension.
- 3. Add 60 mls of crop oil to the quart jar or 1 milliliter of non-ionic surfactant if it is being used in place of oil, gently mix.

- 4. If nitrogen is being used, add 16 mls of the 28 to 32% nitrogen source to the quart jar. If ammonium sulfate is being used, add 19 g AMS to the quart jar in place of the 28 to 32% nitrogen.
- 5. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
- 6. An ideal tank mix combination will be uniform. If any of the following conditions are observed question the choice of adjuvant:
  - a) Layer of oil or globules on the mixture's surface.
  - b) Flocculation: fine particles in suspension or as a layer on the bottom of the jar.
  - c) Clabbering: Thickening texture (coagulated) like gelatin.

# APPLICATION EQUIPMENT

Application equipment must be clean and in good repair. Nozzles must be uniformly spaced on boom and frequently checked for accuracy.

#### BROADCAST APPLICATION

Apply this product, and this product's tank mixes, with ground equipment using standard commercial sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume.

#### BAND APPLICATION

When banding, use proportionately less water and this product per acre.

#### HANDGUN APPLICATION

Applications may also be made using a handgun sprayer. Use a spray volume of at least 40 gallons per acre to insure uniform coverage.

#### **AERIAL APPLICATION**

To obtain satisfactory weed control with aerial applications of this product, uniform coverage must be obtained. Do not spray when drift is possible or when wind velocity is more than 10 mph. Avoid spraying this product within 200 feet of dwellings, adjacent sensitive crops or environmentally sensitive areas. To obtain satisfactory application and drift, the following directions must be observed:

#### Volume Pressure

Use this product in 5 to 10 gallons of water per acre with a maximum spray pressure of 40 PSI. Application at less than 5 gallons per acre will provide inadequate weed control. Higher gallonage applications provide more consistent weed control.

#### Nozzle and Nozzle Operation

Use nozzles that produce flat or hollow cone spray patterns. Use non-drip type nozzles, including diaphragm type nozzles to avoid unwanted discharge of spray solution. The nozzle must be directed toward the rear of the aircraft, at an angle between 0° and 15° downward. Do not place nozzles on the outer 25% of the wings or rotors.

# Adjuvants

Refer to the additive section or the tank mix partner's label for adjuvant specifications.

#### TANK MIX APPLICATION

In addition to weeds controlled by this product used alone, tank mixtures with other preemergence and postemergence herbicides registered for use in non-crop areas provide a broader spectrum of weed control. This product must be tank mixed with other non-crop herbicides including, but not limited to those products listed below.

#### TANK MIX COMBINATIONS FOR NON-SELECTIVE VEGETATION CONTROL

2 4-D hexazinone picloram bromacil imazapic pramitol chlorsulfuron imazanyr prodiamine dicamba metsulfuron-methyl simazine diuron norflurazon sulfometuron-methyl clopyralid orvzalin tebuthiuron glyphosate pendimethalin triclopyr

**IMPORTANT:** Completely read and follow the label of any potential tank mix partner. When using tank mixtures, use conditions must be in accordance with the most restrictive of the label limitations and precautions on either herbicide label.

# **USE RESTRICTIONS**

- Do not apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- Do not re-apply this product within 30 days.

#### DIRECTIONS FOR USE

#### TIN CONIFER RE-FORESTATION SITES FOLLOWING TIMBER HARVEST

This product is a preemergence and postemergence herbicide for control of selected grass and broadleaf weeds in conifer re-forestation sites following timber harvest operations. This product may be used as a site preparation treatment prior to transplanting of conifers or as a conifer release treatment after stand establishment.

†Not for use in CA

# Site Preparation - Application Before Transplanting

Apply 8 to 12 fl oz of this product per acre. Transplant operations must take place at least 3 months after application. To obtain optimal weed control, apply this product before weed emergence or after a burndown herbicide has controlled existing vegetation. If existing weed canopy is less than 40%, this product may be tank mixed with a burndown herbicide to provide preemergence weed control.

Apply this product in at least 10 gallons of water per acre to achieve uniform spray coverage using ground or aerial spray equipment.

#### Conifer Release Treatments - Applications only within 3 years after transplanting.

Apply 8 to 12 fl oz of this product per acre over the top of trees prior to budbreak in the spring or after dormancy in fall. Do not apply this product over the top of trees after budbreak or needle spotting and defoliation may occur. This product should not affect new growth of trees. See Table 2 for a list of tolerant conifers for over the top treatments.

#### TANK MIXING - Conifer Release Treatments

Certain liquid formulations of other pesticides may increase the postemergence activity of this product, but may also increase the potential for injury when applied over the top of various plants. Therefore, tank mixtures of these materials with this product may be more injurious than this product applied alone and need to be tested to determine if they can be used safely on a widespread basis.

#### ADJUVANTS - Conifer Release Treatments

When using as a Conifer Release Treatment, do not mix this product with any adjuvant or fertilizer.

IMPORTANT: When applied as directed, the conifers listed in Table 2 have shown tolerance to this product. However, this product is a very active herbicide. Exercise responsible judgment and caution until familiarity is gained with this product. If a desired conifer species is not listed in Table 2, evaluate the safety of this product on a small number of plants under commercial growing conditions, and monitor plant response for four to six weeks for phytotoxicity. Test this product on a small number of plants to determine if this product can be used safely on a widespread basis. Do not apply this product over the top of conifers until trees have been growing in the treated area for at least one year. The use of nylon mesh wraps, commonly used to deter animal browsing, may increase plant injury if placed on plants after over the top application of this product.

# **USE RESTRICTIONS**

- Do not apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- Do not re-apply this product within 30 days.

# **TABLE 2. TOLERANT CONIFER TREE SPECIES**

SCIENTIFIC NAME
Thuja occidentalis
Thuja orientalis
Abies concolor
Abies lasiocarpa
Pseudotsuga menzesii
Abies fraseri
Abies grandis
Abies procera
Abies bommuelleriana
Tsuga Canadensis
Tusga heterophylla
Juniperus scopularum
Juniperus horizontalis
Juniperus chinensis
Juniperus Sabina
Pinus nigra
Pinus strobes
Pinus banksiana
Pinus thunbergiana
Pinus taeda
Pinus contorta
Pinus palustris
Pinus mugo
Pinus ponderosa
Pinus clausa
Pinus sylvestris
Pinus echinata
Pinus elliottii
Pinus virginiana
Picea pungens
Picea glauca conica
Picea abies
Picea sitchensis
Taxus baccata

#### DIRECTIONS FOR USE

# **TIN POPLAR PLANTATIONS AND TIMBER RE-FORESTATION SITES**

This product is a preemergence and postemergence herbicide for control of selected grass and broadleaf weeds in poplar plantations and timber re-forestation sites following timber harvest operations. This product may be used as a site preparation treatment prior to transplanting of trees or as a release treatment after stand establishment.

\*Not for use in CA

## Site Preparation - Application Before Transplanting

Apply 8 to 12 fl oz of this product per acre. Transplant operations must take place at least 3 months after application. To obtain optimal weed control, apply this product before weed emergence or after a burndown herbicide has controlled existing vegetation. If existing weed canopy is less than 40%, this product may be tank mixed with a burndown herbicide to provide preemergence weed control.

Apply this product in at least 10 gallons of water per acre to achieve uniform spray coverage using ground or aerial spray equipment.

# Release Treatments - Applications Within 3 Years After Transplanting

Apply 8 to 12 fl oz of this product per acre over the top of trees prior to budbreak in the spring or after dormancy in fall. Do not apply this product over the top of trees after budbreak or leaf spotting and defoliation may occur. This product should not affect new growth of trees of tolerant poplars for over the top treatments.

#### TANK MIXING - Poplar Release Treatments

Certain liquid formulations of other pesticides may increase the postemergence activity of this product, but may also increase the potential for injury when applied over the top of various plants. Therefore, tank mixtures of these materials with this product may be more injurious than this product applied alone and need to be tested to determine if they can be used safely on a widespread basis.

#### ADJUVANTS - Poplar Release Treatments

When applying Release Treatments, do not mix this product with any adjuvant or fertilizer.

**IMPORTANT:** When applied as directed, poplars (*Populus balsamifera*, *P. niger and P. tremuloides*), hybrid poplars (*P.* sp. x sp.), and cottonwoods (*P. deltoids and P. trichocarpa*) have shown tolerance to this product. However, this product is a very active herbicide. Exercise responsible judgment and caution until familiarity is gained with this product. Test this product on a small number of plants to determine if this product can be used safely on a widespread basis. Do not apply this product over the top unless trees are more than one year old.

#### USE RESTRICTIONS

- Do not apply more than 2 applications at 12 fl oz (0.38 lb ai) per acre or 3 applications at 8 fl oz (0.25 lb ai) per acre per year.
- . Do not re-apply this product within 30 days.

# STORAGE AND DISPOSAL

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

#### PESTICIDE STORAGE

Keep pesticide in original container. Store in a cool, dry, secure place. Do not put formulation or dilute spray solution into food or drink containers. Do not contaminate food or foodstuffs. Do not store or transport near feed or food. Not for use or storage in or around the home. For help with any spill, leak, fire or exposure involving this material, call day or night **CHEMTREC (800) 424-9300.** 

# PESTICIDE DISPOSAL

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

#### CONTAINER HANDLING:

**NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable "No refillable" or "Refillable" or "Refillable" or solution. Follow the container disposal [handling] instructions below that apply to your container type / size.

Nonrefillable Containers 5 gallons or less: Nonrefillable container. Do not reuse or refill this container. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

Nonrefillable containers larger than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times, Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip, Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke. Refillable containers larger than 5 gallons: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available, If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stav out of smoke.

#### WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

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