

## Herbicide

For control of undesirable vegetation on forestry sites, pasture, rangeland and industrial noncropland areas including railroad, utility, pipeline, highway rights of way, utility plant sites, petroleum tank farms, pumping installations, storage areas, non-agricultural fence lines, non-irrigation ditchbanks, road rights-of-ways, transmission right-of-ways, and industrial bareground areas, and for the establishment and maintenance of wildlife openings.

#### **ACTIVE INGREDIENT:**

# KEEP OUT OF REACH OF CHILDREN CAUTION

SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS

SEE INSIDE BOOKEET FOR FIRST AID AND ADDITIONAL PREGACTIONANT STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300

For Medical Emergencies Only, Call (877) 325-1840

EPA Reg. No. 228-536

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





Net Contents

30 Gal.
(113.65 L)

Nonrefillable Container

<sup>\*</sup> Contains 2.45 lbs/gal of the isopropylamine salt of imazapyr, or 2.0 lbs/gal of imazapyr acid equivalent.

#### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS CAUTION

Causes moderate eye irritation. Avoid contact with skin, eyes or clothing.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE):

Mixers, loaders, applicators and other handlers must wear:

- · Long-sleeved shirt and long pants,
- Shoes plus socks
- · Chemical-resistant gloves for mixers and loaders, plus applicators using handheld equipment.

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

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

#### USER SAFETY RECOMMENDATIONS

#### Users Should:

- Wash hands 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. If pesticide gets on skin, wash immediately with soap and water.
- · 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.

FIRST AID		
IF IN EYES	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	
IF ON SKIN OR CLOTHING	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.	
IF INHALED	Move person to fresh air.     If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.     Call a poison control center or doctor for further treatment advice.	
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.

#### PHYSICAL AND CHEMICAL HAZARDS

Spray solutions of this product should be mixed, stored, and applied only in stainless steel, fiberglass, plastic, and plastic-lined steel containers. Do not mix, store, or apply this product or spray solutions of this product in unlined steel (except stainless steel) containers or spray tanks.

#### **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to plants. Drift and run off may be hazardous to plants in water adjacent to treated areas. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean water mark. Do not contaminate water when disposing of equipment washwater or rinsate. See Directions for Use for additional precautions and requirements.

#### **DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its 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 responsible for pesticide regulation.

#### AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours.

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

- · chemical-resistant gloves made of any waterproof material
- shoes plus socks
- protective eyewear

#### 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 plants on farms, forests, nurseries, or greenhouses.

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

This product may be used only in accordance with directions and restrictions in this label. Keep containers closed to avoid spills and contamination.

#### **PRECAUTIONS**

- Keep from contact with fertilizers, insecticides, fungicides, and seeds to prevent unintentional exposure of desirable vegetation to this product.
- Thoroughly clean application equipment after use. Flush tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately).

#### RESTRICTIONS

- Do not use on food or feed crops.
- Do not apply to the inside of ditches used to transport irrigation water.
- Do not apply or drain or flush equipment on or near sensitive desirable 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 Christmas trees.
- Do not apply more than 1.5 lbs acid equivalent (ae) Imazapyr (equivalent to 96 fl. oz. of this product) per acre
  per year.

#### PRODUCT USE INFORMATION

This product is an aqueous formulation that is readily mixable with water, or a recommended penetrating oil. For foliar applications, this product may be mixed with water as the spray carrier or an emulsion carrier may be prepared by mixing this product into water and then adding a suitable seed oil at 12 to 50%, by volume. This product is to be mixed with water or a penetrating oil and applied as a spray to cut stumps. This product should be mixed with a penetrating oil for application to the basal area of brush and trees. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions 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. Adequate agitation should be maintained with all emulsion mixtures of this product to prevent phase separation. Prior to actual tank mixing with other products, herbicides and carrier oils, compatibility testing in small containers is recommended!

This product is for vegetation control in forestry sites. Roadsides contiguous with the treated area may be included.

This product is used for control of vegetation in forestry site preparation, in directed applications for conifer release and for mid-rotation release using understory broadcast applications.

This product is also used for the control of undesirable vegetation along non-irrigation ditch banks and for the establishment and maintenance of wildlife openings, except in the state of California. See use directions for CUT STUMP TREATMENTS, TREE INJECTION TREATMENTS, FRILL OR GIRDLE TREATMENTS, THINLINE BASAL AND STEM APPLICATIONS, LOW VOLUME BASAL BARK TREATMENTS and LOW VOLUME FOLIAR APPLICATIONS.

This product is also recommended for control of undesirable vegetation on pasture, rangeland and industrial noncropland areas including railroad, utility, pipeline, highway rights of way, utility plant sites, petroleum tank farms, pumping installations, storage areas, fence rows, roads, transmission lines, and industrial bareground areas. This product can also be used with asphalt and asphalt slurries to control weeds on road shoulders, under pavement, in roadside cracks and crevices, and to prevent weed encroachment on highways and paved surfaces.

This product may be applied on forestry sites that contain areas of temporary surface water caused by the collection of water between planting beds, in equipment ruts, or in other depressions created by forest management activities, except in the states of California and New York. It is permissible to treat drainage ditches, intermittent drainage, intermittently flooded low lying sites, seasonally dry flood plains, and transitional areas between upland and lowland sites when no water is present, except in the states of California and New York. Only the edge of drainage ditches can be treated for drainage ditches that contain water. It is also permissible to treat marshes, swamps, and bogs after water has receded, as well as seasonally dry flood deltas, except in the states of California and New York. Do not make applications to natural or man-made bodies of water such as lakes, reservoirs, ponds, streams, rivers and canals.

#### SYMPTOMOLOGY:

This product is readily absorbed through foliage, bark and roots and is translocated rapidly throughout the plant, with accumulation in meristematic regions. Treated plants stop growing soon after herbicide application. Chlorosis first appears in the youngest leaf tissue. In perennials, the herbicide is translocated into the roots, thus preventing resprouting. Chlorosis and tissue necrosis may not be apparent in some species for several weeks after application. Woody plants, brush, and trees may not display the full extent of herbicide control until several months following application.

#### PRECAUTIONS FOR AVOIDING INJURY TO NON-TARGET PLANTS

Untreated trees can occasionally be affected by root uptake of this product through movement into the top soil. Injury or loss of desirable trees or plants may result if this product is applied on or near desirable trees or other plants, on areas where their roots extend, or in locations where the treated soil may be washed or moved into contact with their roots.

#### **SPRAY DRIFT REQUIREMENTS**

#### **Aerial Applications:**

- 1. Applicators are required to use a Coarse or Coarser droplet size (ASABE S572) or, if specifically using a spinning atomizer nozzle, applicators are required to use a volume mean diameter (VMD) of 385 microns or greater for release heights below 10 feet; Applicators are required to use a Very Coarse or coarser droplet size or, if specifically using a spinning atomizer nozzle, applicators are required to use a VMD of 475 microns or greater for release heights above 10 feet; Applicators must consider the effects of nozzle orientation and flight speed when determining droplet size
- 2. Applicators are required to use upwind swath displacement.
- 3. The boom length must not exceed 60% of the wingspan or 90% of the rotor blade diameter to reduce spray drift.

- 4. Applications with wind speeds less than 3 mph and with wind speeds greater than 10 mph are prohibited.
- 5. Applications into temperature inversions are prohibited.

#### **GROUND BOOM APPLICATION**

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

#### SITE PREPARATION TREATMENTS

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

Crop Species	Rate (fl. oz./A)
Loblolly Pine (Pinus taeda)	48 – 80
Loblolly X Pitch Hybrid	48 – 80
Longleaf Pine (Pinus palustris)	48 – 80
Shortleaf Pine (Pinus echinata)	48 – 80
Virginia Pine (Pinus virginiana)	48 – 80
Slash Pine (Pinus elliottii)	40 – 64
Douglas-Fir (Pseudotsuga menziesii)	24 – 48
Western Hemlock (Tsuga heterophylla)	24 – 48
Coastal Redwood (Sequoia sempervirens)	24 – 48
Incense Cedar (Libocedrus decurrens)	24 - 48
California Red Fir (Abies magnifica)	24 – 40
California White Fir (Abies concolor)	24 – 40
Jack Pine (Pinus banksiana)	24 – 32
Lodgepole Pine (Pinus contorta)	24 – 32
Pitch Pine (Pinus rigida)	24 – 32
Ponderosa Pine (Pinus ponderosa)	24 – 32
White Pine (Pinus strobus)	24 – 32
Black Spruce (Picea mariana)	24 – 32
Red Spruce (Picea rubens)	24 – 32
White Spruce (Picea glauca)	24 – 32

Use the specified rate of this product per acre applied as a broadcast foliar spray for long-term control of labeled woody plants and residual control of herbaceous weeds. Within 4 to 6 weeks of treatment, grasses and other herbaceous weeds will be controlled and may provide fuel to facilitate a site preparation burn, if desired, to control conifers or other species tolerant to the herbicide. Do not apply more than 1.5 lbs acid equivalent (ae) Imazapyr (equivalent to 96 fl. oz. of this product) per acre per year.

#### MIXING AND APPLICATION INSTRUCTIONS FOR SITE PREPARATION

Apply the specified rate of this product per acre in 5 to 20 gallons total spray carrier for helicopter applications or 5 to 40 gallons total spray carrier for mechanical or backpack ground spray applications. Enhanced brownout for burning and improved control of brush and grasses may be obtained by application of this product in 12 to 50% oil:water (volume:volume) emulsion carrier. Methylated or ethylated seed oils containing at least 50% esterified seed oil by volume are recommended. Mix this product into the water portion of the carrier thoroughly, then add the oil and mix thoroughly again to obtain a uniform emulsion. Use the higher label rates of this product and higher spray volumes when controlling particularly dense or multi-layered canopies of hardwood stands, or difficult to control species. Make applications during the growing season; beginning in the spring after full leaf expansion of the target weed or brush has occurred and complete applications before leaf drop in the fall.

Tank mixes may be necessary for chemical control of conifers and other species tolerant to this product in certain cases. Tank mix products may be used provided that the label of the tank mix product does not prohibit such mixing. Observe all precautions and restrictions on the product labels. Always follow the most restrictive label instructions for all products used. Combinations with other products labeled for forest site preparation may kill certain plants such as legume's and blackberry which are desirable for wildlife habitat.

Do not plant seedlings of northern or western conifer species, other than Douglas fir, on sites that have been site prepared with a broadcast application of this product or into the treated zone of spot or banded site preparation applications for three months following treatment or injury may occur. Douglas fir seedlings may be planted two months after site preparation treatment with this product.

#### **HELICOPTER SPRAY EQUIPMENT**

All precautions must be taken to minimize or eliminate spray drift. Applications should not be made under gusty conditions. The use of controlled droplet booms and nozzle configurations is recommended.

**IMPORTANT:** Do not make applications by fixed wing aircraft. Maintain adequate buffer zones. Thoroughly clean application and mixing equipment, including landing gear, immediately after use. Prolonged exposure of this product to uncoated steel (except stainless steel) surfaces may result in corrosion and failure of the exposed part.

#### DIRECTED FOLIAR APPLICATIONS FOR CONIFER RELEASE

This product may be applied as a directed spray using water or oil emulsion carrier for control and suppression of labeled brush and weed species. Directed spray applications may be made using low carrier volumes (generally 10 gallons total spray per acre or less) in labeled conifer stands of all ages by targeting the unwanted vegetation and avoiding direct application to the conifer. Ensure that the maximum labeled rates per acre listed for the conifer species are not exceeded.

Use directed foliar applications of this product for release of the following conifers from hardwood competition:

Loblolly Pine (Pinus taeda)	24 – 40
Loblolly X Pitch Hybrid	24 – 40
Virginia Pine (Pinus virginiana)	24 – 40
Longleaf Pine (Pinus palustris)	24 – 32
Pitch Pine (Pinus rigida)	24 – 32
Shortleaf Pine (Pinus echinata)	24 – 32
Slash Pine (Pinus elliottii)	24 – 32
White Pine (Pinus strobus)	16 – 32
Lodgepole Pine (Pinus contorta)	16 – 24
Douglas-Fir (Pseudotsuga menziesii)	16 – 24
Jack Pine (Pinus banksiana)	12 – 24
Black Spruce (Picea mariana)	12 – 24
Red Spruce (Picea rubens)	12 – 24
White Spruce (Picea glauca)	12 – 24
Western Hemlock (Tsuga heterophylla)	12 - 24
Coastal Redwood (Sequoia sempervirens)	12 – 24
Incense Cedar (Libocedrus decurrens)	12 - 24
California Red Fir (Abies magnifica)	12 – 20
California White Fir (Abies concolor)	12 – 20
Ponderosa Pine (Pinus ponderosa)	12 - 16

For applications directed to the foliage of undesirable brush mix 2 to 10% this product in water. For brush species with thick leaf cuticles or difficult to control species use oil emulsion carrier containing 12 to 50%, by volume, recommended oil diluent. Apply the spray solution or emulsion to at least two-thirds of each hardwood crown using backpack sprayers or hand held equipment. Do not spray to the point of runoff and avoid spraying the conifers for best results. For low volume foliar applications to control big leaf maple a 5% by volume solution or emulsion of this product is recommended.

Some minor conifer growth inhibition may be observed when release treatments are made during periods of active conifer growth. To minimize potential conifer height growth inhibition, release treatments may be made late in the growing season after formation of final conifer resting buds. To prevent possibility of conifer injury, do not apply this product when conifers are under stress from drought, diseases, animal or winter injury, or other stresses reducing conifer vigor.

Injury may occur to non-target or desirable hardwoods if they extend from the same root system as treated stems, or their root systems are grafted to those of the treated tree, or if their roots extend into the soil near treated trees.

Do not apply more than 1.5 lbs acid equivalent (ae) Imazapyr (equivalent to 96 fl. oz. of this product) per acre per year.

#### UNDERSTORY BROADCAST APPLICATIONS FOR MID-ROTATION RELEASE

This product may be applied as a broadcast application below the conifer canopy to control understory brush and suppress trees for labeled species. Ground spray machinery or hand held equipment may be used to broadcast this product in water or oil emulsion carrier below the crop tree canopy in a manner as to minimize spray contact by the live crown of crop trees.

Ensure that maximum labeled rates per acre listed for crop species below are not exceeded. Do not apply more than 1.5 lbs acid equivalent (ae) Imazapyr (equivalent to 96 fl. oz. of this product) per acre per year.

Crop Species	Rate (fl. oz./Acre)
Loblolly Pine (Pinus taeda)	64
Loblolly X Pitch Hybrid	64
Virginia Pine (Pinus virginiana)	64
Longleaf Pine (Pinus palustris)	32
Pitch Pine (Pinus rigida)	32
Shortleaf Pine (Pinus echinata)	32
Slash Pine (Pinus elliottii)	32

#### **CUT STUMP TREATMENTS**

Mix 8.0-16.0 fluid ounces of this product in one gallon of water\*, or a penetrating oil.

This product may be tank mixed with Relegate®, Trooper® 22K, Razor/Razor® Pro, or Aquaneat® to control labeled species. Spray or brush this product's solution onto the cambium area of the freshly cut stump surface. Ensure that this product's solution thoroughly wets the cambium area (the wood next to the bark) of the stump. The use of a surfactant or penetrating agent may improve uptake through partially callused cambiums. Applications can be made anytime during the year except during periods of heavy sap flow in the spring. Do not over apply causing puddling. Do not apply more than 1.5 lbs acid equivalent (ae) Imazapyr (equivalent to 96 fl. oz. of this product) per acre per year.

\*Note: Use water as a diluent only when temperatures are sufficient to prevent freezing or add antifreeze (ethylene glycol) according to label directions to prevent freezing.

#### TREE INJECTION TREATMENTS

No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is directly injected into agricultural plants.

Mix 8.0-12.0 fluid ounces of this product in one gallon of water\*. Using standard injection equipment, apply 1 ml of this product's solution at each injection site around the tree with no more than 1 inch intervals between cut edges.

Ensure that the injector completely penetrates the bark at each site. Do not apply more than 1.5 lbs acid equivalent (ae) Imazapyr (equivalent to 96 fl. oz. of this product) per acre per year.

\*Note: Use water as a diluent only when temperatures are sufficient to prevent freezing or add antifreeze (ethylene glycol) according to label directions to prevent freezing.

#### FRILL OR GIRDLE TREATMENT

Using a hatchet, machete, or chain saw, make cuts through the bark and completely around the tree to expose the cambium. The cut should angle downward extending into the cambium enough to expose at least two growth rings. Using a spray applicator or brush, apply a 25% to 100% solution of this product into each cut until thoroughly wet. Avoid applying so much herbicide that runoff to the ground or water occurs. Do not apply more than 1.5 lbs acid equivalent (ae) Imazapyr (equivalent to 96 fl. oz. of this product) per acre per year.

#### **CUT STUBBLE**

This product can be applied within 2 weeks following mechanical mowing or cutting of brush. Best results are obtained when some regrowth of brush has occurred. To suppress or control resprouting, uniformly apply a spray solution of 1 to 2 pints of this product plus 2.5 gallons (5% v/v) basal oil, or similar penetrating agent plus enough water to make 50 gallons of spray solution to treat one acre. This product may be tank mixed with 1 to 2 quarts of Relegate® or Trooper® and other labeled products to aid in control or suppression of brush. When tank mixing, follow all precautions on the tank mix product label and always follow the most restrictive label. Tank mixes should include at least 5% (v/v) penetrating agent. The addition of at least 5% (v/v) penetrating agent can aid in uptake through the bark or exposed roots. Cut stubble applications are made to the soil and cut brush stumps. This type of application may increase ground cover injury. However, vegetation will recover. Making applications of this product directly to the soil can increase potential root uptake causing injury or death of desirable trees. Do not apply more than 1.5 lbs acid equivalent (ae) Imazapyr (equivalent to 96 fl. oz. of this product) per acre per year.

#### **USE WITH ASPHALT AND PAVED SURFACES**

This product may be applied at 3 quarts per acre in combination with MC 30, MC 70, RC 70, and SC 70 asphalts to control weeds which encroach on road shoulders under guardrails, or in cracks and crevices of paved surfaces. The addition of an emulsifier may be needed to allow proper mixing of this product with other asphalts. Add this product to the distribution tank just before application, allowing sufficient time for it to mix uniformly with the asphalt. Mixtures should not be heated above 150°F. Do not allow mixture to stand. Apply as soon as thoroughly mixed. Do not apply more than 1.5 lbs acid equivalent (ae) Imazapyr (equivalent to 96 fl. oz. of this product) per acre per year.

#### THINLINE BASAL AND STEM APPLICATIONS

This product may be applied as a thinline basal or arcing application to the stems of susceptible species such as big leaf maple (Acer macrophyllum), willow (Salix spp.) and Eucalyptus (Eucalyptus spp.) with a stem ground line diameter of 3 inches or less. Mix 24 to 48 ounces of this product in one gallon of penetrating oil. Maintain uniform mixtures with frequent agitation. Direct a thin line of the spray solution to the stems beginning a few feet from the ground and descending toward the base of the tree making a zig-zag motion. Do not over apply causing puddling. Do not apply more than 1.5 lbs acid equivalent (ae) Imazapyr (equivalent to 96 fl. oz. of this product) per acre per year.

#### LOW VOLUME BASAL BARK TREATMENTS

Mix 8.0-12.0 fluid ounces of this product in one gallon of penetrating oil. To control mixed brush species with up to 4 inch stem diameter at breast height, spray to wet the lower 12-18 inches of the stem with this product's oil mixture (include the root collar area). Do not over apply causing dripping or puddling. Maintain uniform mixtures with frequent agitation. Avoid application on sites that have been mowed prior to application resulting in a high density of stump resprouts containing multiple, small (1/2 inch diameter or less) stems. Application sites containing high stem densities and multiple, small (1/2 inch diameter or less) stems should be foliar treated with low volume backpack or fixed boom applications. This product may be tank mixed with Relegate, Patron 170 and other basal products to broaden the spectrum of control. Consult the herbicide labels for rates and susceptible brush species. When tank mixing, follow all precautions on the tank mix product label and always follow the most restrictive label. Use a tank mix of 3 to 5% of this product plus 15 to 20% Relegate in basal oil to control black locust, honey locust, hackberry, elms and other species listed on manufacturer's labels. Use the higher rate of this product (5%) in areas containing sassafras, oak, hickory, cherry, and maples or in the southern 2/3 of the U.S. A tank mix of 3% of this product + Relegate is effective in the Northeastern U.S. Do not apply more than 1.5 lbs acid equivalent (ae) Imazapyr (equivalent to 96 fl. oz. of this product) per acre per year.

#### LOW VOLUME FOLIAR APPLICATIONS

This product may be applied as a low volume foliar application. Mix 3-5% of this product in water and adjuvant or in a penetrating oil. For small brush spray down on the crown to cover approximately 70% of the plant foliage. For larger brush insure coverage on as much of the crown as possible and spray at least two sides of the plant. May be tank mixed with other labeled herbicides. Use a tank mix of 3 to 5% of this product plus 15 to 20% Relegate® in basal oil to control black locust, honey locust, hackberry, elms and other species listed on manufacturer's labels. Use the higher rate of this product (5%) in areas containing sassafras, oak, hickory, cherry, and maples or in the southern 2/3's of the U.S. A tank mix of 3% of this product + Relegate is effective in the Northeastern U.S. Do not apply more than 1.5 lbs acid equivalent (ae) Imazapyr (equivalent to 96 fl. oz. of this product) per acre per year.

#### SPRAY SOLUTION MIXING GUIDE FOR LOW VOLUME FOLIAR APPLICATIONS

AMOUNT OF SPRAY	DESIRED CONCENTRATION (fluid volume)			
SOLUTION BEING PREPARED	This Product		Relegate	
(gallons)	3%	5%	15%	20%
1	3.8 oz	6.4 oz	19.2 oz	25.6 oz
3	11.5 oz	19.2 oz	57.6 oz	76.8 oz
4	15.4 oz	25.6 oz	76.8 oz	102.4 oz
5	19.2 oz	32.0 oz	96.0 oz	1.0 gallon
50	1.5 gallons	2.5 gallons	7.5 gallons	10.0 gallons
100	3.0 gallons	5.0 gallons	15.0 gallons	20.0 gallons

% Solution	Product Per Gallon of Mix (oz)	Product Per 4 Gallon Backpack (oz)
0.25	0.3	1.3
0.5	0.6	2.6
1.0	1.3	5.1
2.0	2.6	10.2
3.0	3.8	15.4
5.0	6.4	25.6

#### **Measuring Chart**

128 fluid ounces	=	1 gallon
16 fluid ounces	=	1 pint
8 pints	=	1 gallon
4 quarts	=	1 gallon
2 pints	=	1 quart

#### **INVERT EMULSIONS**

This product can be applied as an invert emulsion carrier. The carrier is a thick invert water-in-oil spray emulsion designed to minimize spray drift and spray run off, resulting in more herbicide on the target foliage. The spray emulsion may be formed in a single tank (batch mixing) or injected (in-line mixing). Consult the invert chemical label for proper mixing directions. Do not apply more than 1.5 lbs acid equivalent (ae) Imazapyr (equivalent to 96 fl. oz. of this product) per acre per year.

#### FOR SPOT TREATMENT WEED CONTROL IN GRASS PASTURE AND RANGELAND

For the control of undesirable vegetation in grass pasture and rangeland, this product may be applied as a spot treatment at a rate of 2 to 48 fluid ounces of product per treated acre using any of the described ground application methods. Spot applications to grass pasture and rangeland may not exceed more than one tenth of the area to be grazed or cut for hay. See appropriate sections of this label for specific use directions for the application method and vegetation control desired. Do not apply more than 0.75 lbs acid equivalent (ae) Imazapyr (equivalent to 48 fl. oz. of this product) per acre per year.

Grazing and haying restrictions: There are no grazing restrictions following application of this product. DO NOT cut forage grass for hay for seven days after application of this product.

#### **GUIDELINES FOR RANGELAND USE**

This product may be applied to rangeland for the control of undesirable vegetation in order to achieve one or more of the following vegetation management objectives:

- 1. The control of undesirable (non-native, invasive and noxious) plant species.
- 2. The control of undesirable vegetation in order to aid in the establishment of desirable rangeland plant species.
- 3. The control of undesirable vegetation in order to aid in the establishment of desirable rangeland vegetation following a fire.
- 4. The control of undesirable vegetation for purposes of wildfire fuel reduction.
- 5. The release of existing desirable rangeland plant communities from the competitive pressure of undesirable plant species.
- 6. The control of undesirable vegetation for purposes of wildlife habitat improvement.

To ensure the protection of threatened and endangered plants when applying this product to rangeland:

- 1. Federal agencies must follow NEPA regulations to ensure protection of threatened and endangered plants.
- 2. State agencies must work with the Fish and Wildlife Service or the Service's designated state conservation agency to ensure protection of threatened and endangered plants.
- 3. Other organizations or individuals must operate under a Habitat Conservation Plan if threatened or endangered plants are known to be present on the land to be treated.

See the appropriate section(s) of this label for specific use directions for the desired rangeland vegetation management objective. This product should only be applied to a given rangeland acre as specific weed problems arise. Long term control of undesirable weed species ultimately depends on the successful use of land management practices that promote the growth and sustainability of desirable rangeland plant species. Do not apply more than 0.75 lbs acid equivalent (ae) Imazapyr (equivalent to 48 fl. oz. of this product) per acre per year.

#### ROTATIONAL CROP INSTRUCTIONS

Rotational crops may be planted twelve months after applying this product at the specified pasture and rangeland rate. Following twelve months after an application of this product, and before planting any crop, a successful field bioassay must be completed. The field bioassay consists of a test strip of the intended rotational crop planted in the previously treated area in the grass pasture/rangeland and grown to maturity. The test strip should include low areas and knolls, and include variations in soil type and pH within the treated area. If no crop injury is evident in the test strip, the intended rotational crop may be planted the following year.

Use of this product in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.

#### **WEEDS CONTROLLED**

This product will provide postemergence control and some residual control of the following target vegetation species. Degree of control is both species and rate dependent.

#### **GRASSES**

The species of annual and perennial grasses controlled by this product include the following:

Annual bluegrass (Poa annua)
Bahiagrass (Paspalum notatum)
Barnyardgrass (Echinochloa crus-galli)
Beardgrass (Andropogon spp.)
Bermudagrass (Cynodon dactylon)
Big bluestem (Andropogon gerardii)

Broadleaf signalgrass (Brachiaria platyphylla)

Canada bluegrass (Poa compressa)

Cattail (Typha spp.)
Cheat (Bromus secalinus)
Cogongrass (Imperata cylindrica)<sup>1</sup>
Crabgrass (Digitaria spp.)

Crowfootgrass (Dactyloctenium aegyptium)

Dallisgrass (Paspalum dilatatum)
Downy brome (Bromus tectorum)
Fall panicum (Panicum dichotomiflorum)
Feathertop (Pennisetum villosum)

Fescue (Festuca spp.)
Foxtail (Setaria spp.)
Giant reed (Arundo donax)
Goosegrass (Eleusine indica)
Guineagrass (Panicum maximum)
Italian ryegrass (Lolium multiflorum)
Itchgrass (Rottboellia exaltata)
Johnsongrass (Sorghum halepense)

<sup>1</sup>Use minimum of 48 oz per acre.

Junglerice (Echinochloa colonum)
Kentucky bluegrass (Poa pratensis)
Lovegrass (Eragrostis spp.)
Orchardgrass (Dactylis glomerata)

Panicum spp.

Paragrass (Brachiaria mutica)
Phragmites (Phragmites australis)
Prairie cordgrass (Spartina pectinata)
Prairie threeawn (Aristida oligantha)
Quackgrass (Agropyron repens)

Reed canary grass (Phalaris arundinacea)

Saltgrass (Distichlis stricta)

Sand dropseed (Sporobolus cryptandrus)

Sandbur (Cenchrus spp.)
Smooth brome (Bromus inermis)
Sprangletop (Leptochloa spp.)
Timothy (Phleum pratense)
Torpedograss (Panicum repens)
Vaseygrass (Paspalum urvillei)
Wild barley (Hordeum spp.)
Wild oats (Avena fatua)

Wirestem muhly (Muhlenbergia frondosa)

Witchgrass (Panicum capillare) Woolly cupgrass (Eriochloa villosa)

#### **BROADLEAF WEEDS**

The species of annual and perennial broadleaf weeds controlled by this product include the following:

Arrowwood (Pluchea sericea)

Broom snakeweed (Gutierrezia sarothrae)

Bull Thistle (Cirsium vulgare) Burclover (Medicago spp.) Burdock (Arctium spp.)

Camphorweed (Heterotheca subaxillaris)
Carolina geranium (Geranium carolinianum)

Carpetweed (Mullugo verticillata)

Chickweed, mouseear (Cerastium vulgatum)

Clover (Trifolium spp.)

Cocklebur (Xanthium strumarium)
Common chickweed (Stellaria media)
Common ragweed (Ambrosia artemisiifolia)

Cudweed (Gnaphalium spp.)
Dandelion (Taraxacum officinale)
Desert camelthorn (Alhagi pseudalhagi)
Diffuse knapweed (Centaurea diffusa)

Dock (Rumex spp.)

Dogfennel (Eupatorium capillifolium) Fiddleneck (Amsinckia intermedia)

Filaree (Erodium spp.) Fleabane (Erigeron spp.) Giant ragweed (Ambrosia trifida) Goldenrod (Solidago spp.)

Gray rabbitbrush (Chrysothamnus nauseosus)

Henbit (Lamium aplexicaule)
Hoary vervain (Verbena stricta)
Horseweed (Conyza canadensis)
Indian mustard (Brassica juncea)
Japanese bamboo/knotweed
(Polygonum cuspidatum)

Knotweed, prostrate (Polygonum aviculare)

Kochia (Kochia scoparia)

Lambsquarters (Chenopodium album) Little mallow (Malva parviflora) Milkweed (Asclepias spp.) Miners lettuce (Montia perfoliata) Mullein (Verbascum spp.)

Nettleleaf goosefoot (Chenopodium murale) Oxeye daisy (Chrysanthemum leucanthemum)

Pepperweed (Lepidium spp.) Pigweed (Amaranthus spp.) Plantain (Plantago spp.)

Pokeweed (Phytolacca americana)
Primrose (Oenothera kunthiana)
Puncturevine (Tribulus terrestris)
Purple loosestrife (Lythrum salicaria)

Purslane (Portulaca spp.)

Pusley, Florida (Richardia scabra) Rocket, London (Sisymbrium irio) Rush skeletonweed (Chondrilla juncea) Russian knapweed (Centaurea repens)

Russian thistle (Salsola kali) Saltbush (Atriplex spp.)

Shepherd's purse (Capsella bursa-pastoris)
Silverleaf nightshade (Solanum elaeagnifolium)

Smartweed (Polygonum spp.) Sorrell (Rumex spp.) Sowthistle (Sonchus spp.) Spurge, annual (Euphorbia spp.) Stinging nettle (Urtica dioica)

Sunflower (Helianthus spp.)
Sweet clover (Melilotus spp.)
Tansymustard (Descurainia pinnata)
Texas thistle (Cirsium texanum)
Velvetleaf (Abutilon theophrasti)

Western ragweed (Ambrosia psilostachya)

Wild carrot (Daucus carota)
Wild lettuce (Lactuca spp.)
Wild parsnip (Pastinaca sativa)
Wild turnip (Brassica campestris)
Woollyleaf bursage (Ambrosia grayi)
Yellow starthistle (Centaurea solstitialis)
Yellow woodsorrel (Oxalis stricta)

#### **VINES AND BRAMBLES**

The species of vines and brambles controlled by this product include the following:

Field bindweed (Convolvulus arvensis)

Greenbriar (Smilax spp.)

Hedge bindweed (Calystegia sequium)

Honeysuckle (Lonicera spp.)<sup>1</sup>
Kudzu (Pueraria laobata)<sup>1,2</sup>
Morningglory (Ipomoea spp.)
Poison ivy (Rhus radicans)
Redvine (Brunnichia cirrhosa)

Trumpetcreeper (Campsis radicans)

<sup>1</sup>Use higher labeled rates.

<sup>2</sup>Use a minimum of 75 GPA – control of established stands may require multiple applications.

#### **WOODY BRUSH AND TREES**

The species of woody brush and trees controlled by this product include the following:

Alder (Alnus spp.)

American beech (Fagus grandifolia)

Ash (Fraxinus spp.)<sup>1</sup> Aspen (Populus spp.)

Australian pine (Casuarina equisetifolia)<sup>5</sup> Autumn olive (Elaeagnus umbellata) Bald cypress (Taxodium distichum)<sup>4</sup> Bigleaf maple (Acer macrophyllum)<sup>1</sup>

Birch (Betula spp.)

Black locust (Robinia pseudoacacia)5

Black oak (Quercus kelloggii) Blackgum (Nyssa sylvatica)<sup>2</sup> Boxelder (Acer negundo)

Brazilian peppertree (Schinus terebinthifolius)

Ceanothis (Ceanothis spp.)
Cherry (Prunus spp.)<sup>1,2</sup>
Chinaberry (Melia azedarach)

Chinese tallow-tree (Sapium sebiferum) Chinquapin (Castanopsis chrysophylla)<sup>4</sup>

Cottonwood (Populus spp.) Cypress (Taxodium spp.) Dogwood (Cornus spp.)<sup>1</sup> Elderberry (Sambucus spp.)<sup>5</sup>

Elm (Ulmus)5

Eucalyptus (Eucalyptus spp.) Hawthorn (Crataegus spp.) Hazel (Corylus cornuta)<sup>5</sup> Hickory (Carya spp.)<sup>1</sup> Holly (Ilex spp.)<sup>1,4</sup>

Including Gallberry (*Ilex glabra*)<sup>4,5</sup>
Tall gallberry (*Ilex coriacea*)<sup>4</sup>
Yaupon (*Ilex vomitoria*)<sup>4</sup>

Honeylocust (Gleditsia triacanthos)<sup>5</sup> Huckleberry (Gaylussacia spp.)

Lyonia spp.

duct include the following: Including Fetterbush (Lyonia lucida)

Staggerbush (Lyonia mariana)

Virginia creeper (Parthenocissus quinquefolia) Wild buckwheat (Polygonum convolvulus)

(Rosa multiflora)

(Rosa bracteata)

Macartney rose

Madrone (Arbutus menziesii)

Wild grape (Vitis spp.)

Wild rose (Rosa spp.)1

Including Multiflora rose

Manzanita, greenleaf (Arctostaphylos patula)4

Maple (Acer spp.)

Melaleuca (Melaleuca quinquenervia)

Mulberry (Morus spp.)<sup>1,3</sup> Oak (Quercus spp.)<sup>1,3</sup> Persimmon (Diospyros virginiana)<sup>2</sup> Poison oak (Rhus diversiloba)

Poison oak (Rhus diversilo, Poplar (Populus spp.)<sup>2</sup> Privet (Ligustrum vulgare) Red alder (Alnus rubra) Red maple (Acer rubrum)

Russian olive (Elaeagnus angustifolia) Saltcedar (Tamarix pentandra) Sassafras (Sassafras albidum) Scotch broom (Cytisus scoparius)<sup>5</sup> Sourwood (Oxydendrum arboreum)<sup>2</sup>

Sumac (Rhus spp.)

Sweetbay magnolia (Magnolia virginiana)<sup>4,5</sup> Sweetgum (Liquidambar styraciflua) Sycamore (Platanus occidentalis) Tanoak (Lithocarpus densiflorus)<sup>1,4,5</sup>

TiTi (Cyrilla racemiflora)1,4

Tree of heaven (Ailanthus altissima)5

Vaccinium spp.

Including Blueberry (Vaccinium spp.)
Sparkleberry (Vaccinium

arboreum)

Wax myrtle (Myrica californica)<sup>4,5</sup> (Myrica cerifera)<sup>4,5</sup>

Willow (Salix spp.)

Yellow-poplar (Liriodendron tulipifera)1

<sup>&</sup>lt;sup>1</sup>Use higher labeled rates.

<sup>&</sup>lt;sup>2</sup>Best control with applications prior to formation of fall leaf color.

<sup>&</sup>lt;sup>3</sup>The degree of control may be species dependent.

<sup>&</sup>lt;sup>4</sup>Oil emulsion carrier is recommended.

<sup>&</sup>lt;sup>5</sup>Tank mix with Relegate as a basal or cut stump treatment

### STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Do not store below 10°F.

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

**CONTAINER DISPOSAL [HANDLING]: NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable "Nonrefillable" or "Refillable" designation. Follow the container disposal [handling] instructions below that apply to your container type / size.

Nonrefillable containers larger than 5 gallons: Nonrefillable container. Do not reuse or refill this container. 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. 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.

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

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