83851-19 2/22/2012 1/33

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Michael Kellogg
AmTide, LLC
c/o Pyxis Regulatory Consulting, Inc.
4110 136th St. NW
Gig Harbor, WA 98332

FEB 22 2012

Subject: Product Name: AmTide Imazapyr 2SL
EPA Reg. No. 83851-19
Label Notification per PRN 98-10
Application Dated: February 9, 2012

Dear Mr. Kellogg,

The Agency is in receipt of your application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for AmTide Imazapyr 2SL (EPA Reg. No. 83851-19) dated February 9, 2012. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please contact Emily Hartman of my staff at (703) 347-0189 or hartman.emily@epa.gov.

Sincerely,

Kable Bo Davis, Product Manager 25
Herbicide Branch
Registration Division
Office of Pesticide Programs

Please read instructions on reverse before comp[illegible] form. Form Approved. [illegible]B No. 2070-0060. Approval expires 2-28-95

EPA

United States
Environmental Protection Agency
Washington, DC 20460

- [ ] Registration
- [ ] Amendment
- [x] Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
83851-19	B. Davis	[x] None [ ] Restricted
4. Company/Product (Name)	**PM#**	
AmTide, LLC / Imazapyr 2SL	25	

5. Name and Address of Applicant *(Include ZIP Code)*

AmTide, LLC
c/o Pyxis Regulatory Consulting, Inc.
4110 136th St. NW
Gig Harbor, WA 98332

[ ] *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

- [ ] Amendment - Explain below.
- [ ] Resubmission in response to Agency letter dated _____
- [x] Notification - Explain below.
- [ ] Final printed labels in repsonse to Agency letter dated _____
- [ ] "Me Too" Application.
- [ ] Other - Explain below.

NOTIFICATION
FEB 22 2012

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

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

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
[ ] Yes [x] No	[ ] Yes [x] No	[ ] Yes [x] No	[ ] Metal [x] Plastic [ ] Glass [ ] Paper [ ] Other (Specify) _____
***Certification must be submitted**	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
[x] Label [ ] Container	1, 2.5, 5, 15, 30 gal	[x] On Label [ ] On Labeling accompanying product

6. Manner in Which Label is Affixed to Product: [x] Lithograph / Paper glued / Stenciled [ ] Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Michael Kellogg	Agent	(253) 853-7369

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingllly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received **(Stamped)**

2. Signature	3. Title	4. Typed Name	5. Date
[signature]	Agent	Michael Kellogg	2/9/12

PYXIS REGULATORY CONSULTING, INC.

4110 136th St. NW
Gig Harbor, WA 98332

Phone: 253-853-7369
Fax: 253-853-5516
www.PyxisRC.com

February 9, 2012

COURIER DELIVERY

Bo Davis (PM 25)
Document Processing Desk (**NOTIF**)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202-4501

RE: AmTide LLC – Imazapyr 2SL (EPA Reg. No. 83851-19)
Notification of Minor Label Revisions per PRN 98-10 to Facilitate Registration in the State of California

Dear Mr. Davis,

On behalf of AmTide LLC please find the enclosed notification of minor label revisions per PRN 98-10 to facilitate registration in the State of California. Changes made to the enclosed labeling include:

1) In the section titled "For Control of Undesirable Weeds Under Paved Surfaces" - off-labeled Spot Treatments and Crack and Crevice Treatments in the State of California.
2) In the "Aquatic Weeds Controlled" table - off-labeled "Beach, vitex" in the State of California.
3) In the "Site Preparation Treatment" and "Directed Foliar Applications for Conifer Release" tables - off-labeled "Western Red Cedar" in the State of California.
4) In the "Woody Brush and Trees" table, corrected spelling of "Aldus" to "Alder"

In support of this label notification, please find the following:

1. Completed Application for Registration (EPA Form 8570-1)
2. One (1) copy of the Imazapyr 2SL label with changes tracked
3. One (1) copy of the Imazapyr 2SL label with changes incorporated
4. Certification with Respect to Label Integrity
5. One (1) copy of the Imazapyr 2SL label on CD
6. Letter of Authorization

If you have any questions or require any additional information, please feel free to contact me by email (Mike@PyxisRC.com) or by phone (273-853-7369).

Sincerely,

Michael Kellogg

Enclosures

cc: D. Wang; AmTide LLC

4/33

Imazapyr 2SL

For the control of undesirable vegetation growing on forestry sites and within specified aquatic, industrial noncropland sites, and rights-of-way, non-agricultural fence rows, non-irrigation ditchbanks, establishment and maintenance of wildlife openings, for the release of unimproved Bermudagrass and Bahiagrass, for bareground weed control, and for use under certain paved surfaces.

ACTIVE INGREDIENT:

Isopropylamine salt of imazapyr: (2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1*H*-imidazol-2-yl]-3-pyridinecarboxylic acid)*	27.6%
OTHER INGREDIENTS:	72.4%
TOTAL:	100.0%

*Contains 2.59 lbs. of the active ingredient (a.i.), isopropylamine salt of imazapyr or 2.1 lbs. imazapyr acid equivalent per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION / PRECAUCION

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.)

FIRST AID	
If on skin or clothing:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If inhaled:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by 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 1-800-424-9300 for emergency medical treatment information.	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

EPA Reg. No. 83851-19 **EPA Est. No.**

Manufactured for:
AmTide LLC
21 Hubble
Irvine, CA 92618

NOTIFICATION

FEB 22 2012

Net Contents:

PERSONAL PROTECTIVE EQUIPMENT (PPE):

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

Mixers, Loaders, Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

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.

ENGINEERING CONTROLS STATEMENTS

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

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands with plenty of soap and water before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to plants. Drift and runoff may be hazardous to plants in water adjacent to treated areas. Do not apply directly to bodies of water except as specified in this label. Treatment of aquatic weeds may result in oxygen depletion or loss due to decomposition of dead plants. This oxygen loss may cause the suffocation of some aquatic organisms. Do not treat more than 1/2 of the surface area of the water in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outward in bands to allow aquatic organisms to move into untreated areas. Do not contaminate water when disposing of equipment washwaters or rinsate. See Directions for Use for additional precautions and requirements.

PHYSICAL OR 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.

Thoroughly clean application equipment, including landing gear, immediately after use of this product. Prolonged exposure of this product to uncoated steel (except stainless steel) surfaces may result in corrosion and failure of the exposed part. The maintenance of an organic coating (paint) may prevent corrosion.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Use this product only in accordance with the instructions contained within this label. Keep containers closed to avoid spills and contamination.

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 intervals. 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 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:

- Coveralls
- 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 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.

PRODUCT USE PRECAUTIONS AND RESTRICTIONS

Applications may be made for the control of undesirable vegetation growing in forestry sites and within specified aquatic, industrial non-cropland sites, and railroad, utility and highway rights-of-way, and non-agricultural fence rows. Aquatic sites consist of standing and flowing water, wetland and riparian areas. Industrial non-cropland sites include utility plant sites, petroleum tank farms, pumping installations, non-agricultural fence rows, storage areas, and non-irrigation ditchbanks. **Imazapyr 2SL** may also be used for the establishment and maintenance of wildlife openings, for the release of unimproved Bermudagrass and Bahiagrass, for bareground weed control, and for use under certain paved surfaces.

- **DO NOT** use on food crops.
- **DO NOT** use on Christmas trees.
- **DO NOT** apply this product within ½ mile upstream of an active potable water intake in flowing water (i.e., river, stream, etc.) or within ½ mile of an active potable water intake in a standing body of water, such as a lake, pond or reservoir.
- **DO NOT** apply within drip-line of desirable trees or areas that will wash **Imazapyr 2SL** into roots of desirable trees and shrubs.
- Keep from contact with fertilizers, insecticides, fungicides and seeds.
- **DO NOT** 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 treated soil may be washed or moved into contact with their roots.
- **DO NOT** use on lawns, walks, driveways, tennis courts, or similar areas.
- **DO NOT** side trim desirable vegetation with this product unless severe injury and plant death can be tolerated. Prevent drift of spray to desirable plants.
- Clean application equipment after using this product by thoroughly flushing with water. Flush tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately).

Nonfood/feed-cropland Sites

- **DO NOT** apply more than 1.5 lbs acid equivalent (ae) imazapyr (equivalent to 96 ozs of **Imazapyr 2SL**) per acre per year.

Aquatic Sites

- **DO NOT** apply more than 1.5 lbs ae imazapyr (equivalent to 96 ozs of **Imazapyr 2SL**) per acre per year.
- **DO NOT** apply to marine or estuarine areas.
- **DO NOT** apply to bodies of water or portions of bodies of water where emergent and/or floating weeds do not exist. **Imazapyr 2SL** has no effect on submerged aquatic vegetation.
- **Public waters.** Application of **Imazapyr 2SL** to water can only be made by federal or state agencies such as Water Management District personnel, municipal officials, and the U.S. Army Corps of Engineers, or those applicators who are licensed or certified as aquatic pest control applicators and are authorized by a federal or state government entity. Treatment to other than non-native invasive species is limited to only those plants that have been determined to be a nuisance by a federal or state government entity.
- **Permitting.** Consult local state fish and game agency and water control authorities before applying this product to public water. Permits may be required to treat such water.
- **Private waters.** Applications may be made to private waters that are still such as ponds, lakes and drainage ditches where there is minimal or no outflow to public waters.
- **Aerial application.** Aerial application to aquatic sites is restricted to helicopter only.
- **Irrigation water.** Application to water used for irrigation that results in **Imazapyr 2SL** residues > 1.0 ppb **MUST NOT** be used for irrigation purposes for 120 days after application or until **Imazapyr 2SL** residue levels are determined by laboratory analysis or other appropriate means of analysis to be 1.0 ppb or less.

Recreational use of water in treatment area. There are no restrictions on the use of water in the treatment area for recreational purposes, including swimming and fishing.

Livestock use of water in/from treatment area. There are no restrictions on livestock consumption of water from the treatment area.

Precautions for potable water intakes. DO NOT apply **Imazapyr 2SL** directly to water within ½ mile upstream of an active potable water intake in flowing water (i.e., river, stream, etc.) or within ½ mile of an active potable water intake in a standing body of water such as a lake, pond or reservoir. To make aquatic applications around and within ½ mile of active potable water intakes, the intake **must** be turned off during application and for a minimum of 48 hours after the application. These aquatic applications may be made only in the cases where there are alternative water sources or holding ponds that would permit turning off of an active potable water intake for a minimum period of 48 hours after the applications.

NOTE: Existing potable water intakes that are no longer in use, such as those replaced by connections to wells or a municipal water system, are not considered to be active potable water intakes. This restriction does not apply to intermittent, inadvertent overspray or water in terrestrial use sites.

Quiescent or Slow-moving Waters. In lakes and reservoirs, **DO NOT** apply **Imazapyr 2SL** within one (1) mile of an active irrigation water intake during the irrigation season. Applications less than one (1) mile from an irrigation water intake may be made during the off-season, provided that the irrigation intake will remain inactive for a minimum of 120 days after application or until **Imazapyr 2SL** residue levels are determined by laboratory analysis or other appropriate means of analysis to be 1.0 ppb or less.

PRODUCT INFORMATION

Imazapyr 2SL is an aqueous solution to be mixed with water and a surfactant and applied as a spray solution to control undesirable vegetation growing within forestry sites and specified aquatic, industrial

non-cropland sites, and railroad, utility, and highway rights-of-way, and non-agricultural fence rows. Aquatic sites consist of standing and flowing water, wetland, and riparian areas. Industrial non-cropland sites include utility plant sites, petroleum tank farms, pumping installations, non-agricultural fence rows, storage areas, and non-irrigation ditchbanks. **Imazapyr 2SL** may also be used for the establishment and maintenance of wildlife openings, for the release of unimproved Bermudagrass and Bahiagrass, for bareground weed control, and for use under certain paved surfaces.

Imazapyr 2SL 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.

Herbicidal Activity. Imazapyr 2SL will control most annual and perennial grasses and broadleaf weeds in addition to many brush and vine species with some residual control of undesirable species that germinate above the waterline. **Imazapyr 2SL** is readily absorbed through emergent leaves and stems and is translocated rapidly throughout the plant with accumulation in the meristematic regions. For maximum activity, weeds should be growing vigorously at the time of application, and the spray solution should include a surfactant (see **ADJUVANTS** section for specific directions). Treated plants stop growing soon after spray application.

Chlorosis appears first in the newest leaves, and necrosis spreads from this point. In perennials, the herbicide is translocated into, and kills, underground or submerged storage organs, which prevents regrowth. Chlorosis and tissue necrosis may not be apparent in some plant species until 2 or more weeks after application. Complete kill of plants may not occur for several weeks. Applications of **Imazapyr 2SL** are rainfast one hour after treatment.

Application Methods. Imazapyr 2SL may be selectively applied by using low-volume directed application techniques or may be broadcast applied by using ground equipment, watercraft, or aircraft (aerial applications to aquatic sites must be made by helicopter). In addition, **Imazapyr 2SL** may also be applied using cut stump, cut stem, and frill and girdle treatment techniques within non-cropland, and aquatic sites (see **AERIAL APPLICATIONS** and **GROUND APPLICATIONS** sections for additional details).

PRECAUTIONS FOR AVOIDING INJURY TO NON-TARGET PLANTS

Untreated desirable plants can be affected by root uptake of **Imazapyr 2SL** from treated soil. Injury or loss of desirable plants may result if **Imazapyr 2SL** is applied on or near desirable plants, on areas where their roots extend, or in locations where the treated soil may be washed or moved into contact with their roots. When making applications along shorelines where desirable plants may be present, caution should be exercised to avoid spray contact with their foliage or spray application to the soil in which they are rooted. Shoreline plants that have roots which extend into the water in an area where **Imazapyr 2SL** has been applied generally will not be adversely affected by uptake of the herbicide from the water.

If treated vegetation is to be removed from the application site, **DO NOT** use the vegetative matter as mulch or compost on or around desirable species.

MANAGING OFF-TARGET MOVEMENT

Aerial Applications

- Applicators are required to use a coarse or coarser droplet size (ASABE S572) or, if specifically using a spinning atomizer nozzle applicators are required to use a volume mean diameter (VMD) of 385 microns or greater for release heights below 10 feet. Applicators are required to use a very coarse or coarser droplet size or, if specifically using a spinning atomizer nozzle, applicators are required to use

a VMD of 475 microns or greater for release heights above 10 feet. Applicators must consider the effects of nozzle orientation and flight speed when determining droplet size.

- Applicators are required to use upwind swath displacement.
- The boom length must not exceed 60% of the wingspan or 90% of the rotor blade diameter to reduce spray drift.
- Applications with wind speeds less than 3 mph and with wind speeds greater than 10 mph are prohibited.
- Applications into temperature inversions are prohibited.

Ground Boom Applications

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

Wind Erosion

Avoid treating powdery, dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.

ADJUVANTS

Postemergence applications of **Imazapyr 2SL** require the addition of a spray adjuvant. When making aquatic applications, only spray adjuvants that are approved or appropriate for aquatic use must be utilized.

Nonionic Surfactants. Use a nonionic surfactant (NIS) at the rate of 0.25% volume/volume (v/v) or higher (see manufacturer's label) of the spray solution (0.25% v/v is equivalent to 1 quart in 100 gallons). For best results, select a nonionic surfactant with an HLB (hydrophilic to lipophilic balance) ratio between 12 and 17 with at least 70% surfactant in the formulated product (alcohols, fatty acids, oils, ethylene glycol or diethylene glycol should not be considered as surfactants to meet the above requirements).

Methylated Seed Oils or Vegetable Oil Concentrates. Instead of a surfactant, a methylated seed oil (MSO) or vegetable-based seed oil concentrate may be used at the rate of 1.5 to 2 pints per acre. When using spray volumes greater than 30 gallons per acre, methylated seed oil or vegetable-based seed oil concentrates should be mixed at a rate of 1% of the total spray volume, or alternatively use a nonionic surfactant as described above. Research indicates that these oils may aid in **Imazapyr 2SL** deposition and uptake by plants under moisture or temperature stress.

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

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

Invert Emulsions. Imazapyr 2SL can be applied as an invert emulsion. The spray solution results in an invert (water-in-oil) spray emulsion designed to minimize spray drift and spray runoff, 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.

Other. An antifoaming agent, spray pattern indicator, or drift-reducing agent may be applied at the product labeled rate if necessary or desired.

TANK MIXES

Imazapyr 2SL may be tank mixed with other herbicides.

Consult manufacturer's labels for specific rate restrictions and weeds controlled. Always follow the more restrictive label restrictions and precautions for all products used when making an application involving tank mixes.

AERIAL APPLICATIONS

All precautions should be taken to minimize or eliminate spray drift. Also see "MANAGING OFF-TARGET MOVEMENT" on the label. Both fixed-wing aircraft and helicopters can be used to apply **Imazapyr 2SL** on non-cropland sites, but only helicopters can be used for aquatic applications. **DO NOT** make applications by fixed-wing aircraft or helicopter unless appropriate buffer zones can be maintained to prevent spray drift out of the target area, or when treating open tracts of land, spray drift as a result of fixed-wing aircraft application can be tolerated. Aerial equipment designed to minimize spray drift, such as helicopter equipped with a **Microfoil™ boom**, **Thru-Valve™ boom**, or raindrop nozzles, must be used and calibrated. Except when applying with a **Microfoil™ boom**, a drift control agent may be added at the specified label rate. Do not side trim with **Imazapyr 2SL** unless death of treated tree can be tolerated.

Uniformly apply the specified amount of **Imazapyr 2SL** in 2 to 30 gallons of water per acre. A foam-reducing agent may be added at the labeled rate, if needed.

IMPORTANT: Thoroughly clean application equipment, including landing gear, immediately after use of this product. Prolonged exposure of this product to uncoated steel (except stainless steel) surfaces may result in corrosion and failure of the exposed part. The maintenance of an organic coating (paint) may prevent corrosion.

GROUND APPLICATIONS

FOLIAR APPLICATIONS

Low-Volume Foliar Application

Use equipment calibrated to deliver 5 to 20 gallons of spray solution per acre. To prepare the spray solution, thoroughly mix in water 0.5% to 5% **Imazapyr 2SL** plus surfactant (see the **ADJUVANTS** section of this label for specific directions). A foam-reducing agent may be applied at the specified label rate, if needed. For control of difficult species (see **Aquatic Weeds Controlled** section and the **Terrestrial Weeds Controlled by Imazapyr 2SL** section for relative susceptibility of weed species), use the higher concentrations of herbicide and/or spray volumes, but **DO NOT** apply more than 6 pints of **Imazapyr 2SL** per acre in aquatic and non-cropland sites. Do not excessively wet foliage. See **Spray Solution Mixing Guide for Low-Volume Foliar Applications** for specified volumes of **Imazapyr 2SL** and water.

For low-volume foliar application, select proper nozzles to avoid over-application. Proper application is critical to ensure desirable results. Best results are achieved when the spray covers the crown and approximately 70 percent of the plant. The use of an even, flat-fan tip with a spray angle of 40 degrees or less will aid in proper deposition.

Recommended tip sizes include 4004E or 1504E. For a straight-stream and cone pattern, adjustable cone nozzles, such as 5500 X3 or 5500 X4, may be used. Attaching a rollover valve onto a Spraying Systems Model 30 gunjet or other similar spray gun allows for the use of both flat-fan and cone tips on the same gun.

11/33

Moisten, but **DO NOT** drench target vegetation causing spray solution to run off.

Low-volume Foliar Application with Backpacks
For low-growing species, spray down on the crown, covering crown, and penetrating approximately 70% of the plant.

For target species 4 to 8 feet tall, swipe the sides of target vegetation by directing spray to at least 2 sides of the plant in smooth vertical motions from the crown to the bottom. Make sure to cover the crown whenever possible.

For target species over 8 feet tall, lace sides of the target vegetation by directing spray to at least 2 sides of the target in smooth zigzag motions from crown to bottom.

Low-volume Foliar Application with Hydraulic Handgun Application Equipment
Use the same technique as described above for **Low-volume Foliar Application with Backpacks**.

For broadcast applications, simulate a gentle rain near the top of target vegetation allowing spray to contact the crown and penetrate the target foliage without falling to the understory. Herbicide spray solution that contacts the understory may result in severe injury or death of plants in the understory.

Spray Solution Mixing Guide for Low-Volume Foliar Applications

Spray Solution Prepared (gallons)	**Desired Concentration (fluid volume)**				
	0.5%	0.75%	1%	1.5%	5%
	(amount of **Imazapyr 2SL** to use)				
1	0.6 oz	0.9 oz	1.3 ozs	1.9 ozs	6.5 ozs
3	1.9 ozs	2.8 ozs	3.8 ozs	5.8 ozs	1.2 pints
4	2.5 ozs	3.8 ozs	5.1 ozs	7.7 ozs	1.6 pints
5	3.2 ozs	4.8 ozs	6.5 ozs	9.6 ozs	2 pints
50	2 pints	3 pints	4 pints	6 pints	10 quarts
100	4 pints	6 pints	8 pints	6 quarts	5 gallons
2 Tablespoons = 1 fluid ounce					

High Volume Foliar Application
For optimum performance when spraying medium-density to high-density vegetation, use equipment calibrated to deliver up to 100 gallons of spray solution per acre (GPA). Spray solutions exceeding 100 GPA may result in excessive spray runoff, causing increased ground cover injury, and injury to desirable species. To prepare the spray solution, thoroughly mix **Imazapyr 2SL** in water and add a surfactant (see **ADJUVANTS** section for specific directions and rates of surfactants). A foam-reducing agent may be added at the labeled rate, if needed. For control of difficult species (see **Aquatic Weeds Controlled** chart and the **Terrestrial Weeds Controlled by Imazapyr 2SL** section for relative susceptibility of weed species), use the higher concentrations of herbicide and/or spray volumes, but **DO NOT** apply more than 6 pints of **Imazapyr 2SL** per acre in aquatic and non-cropland sites. Uniformly cover the foliage of the vegetation to be controlled, but **DO NOT** apply to runoff. Do not excessively wet foliage.

Side Trimming
DO NOT side trim with **Imazapyr 2SL** unless severe injury or death of the treated tree can be tolerated. **Imazapyr 2SL** is readily translocated and can result in death of the entire tree.

CUT-SURFACE TREATMENTS

Imazapyr 2SL may be used to control undesirable woody vegetation by applying the **Imazapyr 2SL** solution to the cambium area of freshly cut stump surfaces or to fresh cuts on the stem of the target woody vegetation. Applications can be made at any time of the year except during periods of heavy sap flow in the spring. **DO NOT** overapply solution causing runoff from the cut surface.

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

Cut-surface Applications With Dilute and Concentrate Solutions
Imazapyr 2 SL may be mixed as either a concentrated or dilute solution. The dilute solution may be used for applications to the cut surface of the stump or to cuts on the stem of the target woody vegetation. Concentrated solutions may be used for applications to cuts on the stem. Use of the concentrated solution permits application to fewer cuts on the stem, especially for large-diameter trees. Follow the application instructions to determine proper application techniques for each type of solution.

- To prepare a dilute solution, mix 8 to 12 fluid ounces of **Imazapyr 2SL** with 1 gallon of water. The use of a surfactant or penetrating agent may improve uptake through partially callused cambiums.
- To prepare concentrated solution, mix 2 quarts of **Imazapyr 2SL** with no more than 1 quart of water.

Cut-Stump Treatments
- **Dilute Solutions.** Spray or brush the solution onto the cambium area of the freshly cut stump surface. Ensure that the solution thoroughly wets the entire cambium area (the wood next to the bark of the stump).

Cut-Stem (injection, hack and squirt) Treatments
- **Dilute Solutions.** Using standard injection equipment, apply 1 milliliter of 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 injection site.
- **Concentrate Solutions.** Using standard injection equipment, apply 1 milliliter of solution at each injection site. Make at least 1 injection cut for every 3 inches of Diameter at Breast Height (DBH) on the target tree. For example, a 3-inch DBH tree will receive 1 injection cut, and a 6-inch DBH tree will receive 2 injection cuts. On trees requiring more than 1 injection site, place the injection cuts at approximately equal intervals around the tree.

Frill or Girdle Treatments
- Using a hatchet, machete, or chainsaw, 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 2 growth rings. Using a spray applicator or brush, apply a 25% to 100% solution of **Imazapyr 2SL** into each cut until thoroughly wet. Avoid applying so much herbicide that runoff to the ground or water occurs.

NON-CROPLAND USES

Applications may be made for the control of undesirable vegetation growing within industrial non-cropland sites. Industrial non-cropland sites include utility plant sites, petroleum tank farms, pumping installations, non-agricultural fence rows, storage areas, and non-irrigation ditchbanks. **Imazapyr 2SL** may also be used for the establishment and maintenance of wildlife openings, for the release of unimproved Bermudagrass and Bahiagrass, for bareground weed control, and for use under certain paved surfaces.

Applications to non-cropland areas that are not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.

Tank Mixes and Application Rates For Low-Volume Foliar Brush Control*

Target Vegetation	Imazapyr 2SL Rate	Tank Mix
Mixed hardwoods without elm, locust, or pine	1.0 to 1.5% by volume	Surfactant
Mixed hardwoods containing elm, locust, and pine	0.5 to 1.0% by volume	**Accord®** at 2% to 3% by volume plus surfactant
Mixed hardwoods with locust and pine but no elm	0.5 to 1.0% by volume	**Krenite®** at 2% to 5% by volume plus surfactant
Mixed hardwoods with locust and elm, but no pine	0.5 to 1.0% by volume	**Escort®** at 2 ozs/A **or** 2.3 grams/gal plus surfactant
*Tank mixes with 2,4-D or products containing 2, 4-D have resulted in reduced efficacy of **Imazapyr 2SL.**		

Mixing Chart

% Solution	Imazapyr 2SL per gallon of mix (ounces)	Imazapyr 2SL per 4-gallon backpack (ounces)
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 ounces	=	1 gallon
16 ounces	=	1 pint
8 pints	=	1 gallon
4 quarts	=	1 gallon
2 pints	=	1 quart

FOR THE SELECTIVE CONTROL OF UNDESIRABLE WEEDS IN UNIMPROVED BERMUDAGRASS AND BAHIAGRASS

Imazapyr 2SL may be used on unimproved Bermudagrass and Bahiagrass turf such as roadsides, utility rights-of-way, and other non-cropland industrial sites. The application of **Imazapyr 2SL** on established common and coastal Bermudagrass and Bahiagrass provides control of labeled broadleaf and grass weeds. Competition from these weeds is eliminated, releasing the Bermudagrass and Bahiagrass. Treatment of Bermudagrass with **Imazapyr 2SL** results in a compacted growth habit and seed-head inhibition.

Uniformly apply with properly calibrated ground equipment using at least 10 gallons of water per acre.

IMPORTANT: Temporary yellowing of grass may occur when treatment is made after growth commences. **DO NOT** add surfactant in excess of the specified rate (1 oz per 25 gallons of spray solution). **DO NOT APPLY** to grass during its first growing season. **DO NOT APPLY** to grass that is under stress from drought, disease, insects, or other causes.

DOSAGE RATES AND TIMING

Bermudagrass. Apply **Imazapyr 2SL** at 6 to 12 ozs per acre when the Bermudagrass is dormant. Apply **Imazapyr 2SL** at 6 to 8 ozs per acre after Bermudagrass has reached full green-up. Applications made during green-up will delay green-up. Include a surfactant in the spray solution (see **IMPORTANT** note above).

For additional preemergence control of annual grasses and small-seeded broadleaf weeds, add **Pendulum® Aquacap™ herbicide** at the rate of 3.1 to 6.3 pints per acre. Consult the **Pendulum Aquacap** label for weeds controlled and for other use directions and precautions.

For control of Johnsongrass in Bermudagrass turf, apply **Imazapyr 2SL** at 8 ozs per acre, plus **Roundup® herbicide** at 12 ozs per acre, plus surfactant. For additional control of broadleaves and vines, **Garlon® 3A** may be added to the above mix at the rate of 1 to 2 pints per acre. Observe all precautions and restrictions on the **Garlon® 3A** and **Roundup®** labels.

Bahiagrass. Apply **Imazapyr 2SL** at 4 to 8 ozs per acre when the Bahiagrass is dormant or after the grass has initiated green-up but has not exceeded 25% green-up. Include a surfactant in the spray solution. (See **ADJUVANTS** section for specific directions on surfactants).

Weeds Controlled in Unimproved Bermudagrass and Bahiagrass:

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

GRASS GROWTH AND SEED-HEAD SUPPRESSION

Imazapyr 2SL may be used to suppress growth and seed-head development of certain turfgrass in unimproved areas. When **Imazapyr 2SL** is applied to desirable turf, it may result in temporary turf damage and/or discoloration. Effects to the desirable turf may vary with environmental conditions. For optimum performance, application should be made prior to culm elongation. Applications may be made before or after mowing. If applied prior to mowing, allow at least 3 days of active growth before mowing. If applied following a mowing, allow sufficient time for the grasses to recover before applying this product or injury may be amplified.

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

Bermudagrass. Apply **Imazapyr 2SL** at 6 to 8 ozs per acre from early green-up to prior to seed-head initiation. **DO NOT** add a surfactant for this application.

Cool Season Unimproved Turf. Apply **Imazapyr 2SL** at 2 ozs per acre plus 0.25% nonionic surfactant. For increased suppression, **Imazapyr 2SL** may be tank mixed with such products as **Campaign®** (24 ozs per acre) or **Embark®** (8 ozs per acre). Tank mixes may increase injury to desired turf. Consult each

product label for specified turf species and other use directions and precautions. Tank mixes with 2, 4-D or products containing 2,4-D may decrease the effectiveness of **Imazapyr 2SL.**

TOTAL VEGETATION CONTROL WHERE BARE GROUND IS DESIRED

Imazapyr 2SL is an effective herbicide for preemergence or postemergence control of many annual and perennial broadleaf and grass weeds where bare ground is desired. **Imazapyr 2SL** is particularly effective on hard-to-control perennial grasses. **Imazapyr 2SL** herbicide at 1.5 to 6 pints per acre can be used alone or in a tank mix with herbicides approved for use in bare ground. The degree and duration of control are dependent on the rate of **Imazapyr 2SL** used, tank mix partner, the volume of carrier, soil texture, rainfall, and other conditions.

Consult manufacturer labels for specific rates and weeds controlled. Always follow the more restrictive label restrictions and precautions for all products used when making an application involving tank mixes.

Applications of **Imazapyr 2SL** may be made any time of the year. Use equipment calibrated to deliver desired gallons per acre spray volume and uniformly distribute the spray pattern over the treated area.

Postemergence Applications. Always use a spray adjuvant (see **ADJUVANTS** section of this label) when making a postemergence application. For optimum performance on tough-to-control annual grasses, applications should be made at a total volume of 100 gallons per acre or less. For quicker burndown or brown-out of target weeds, **Imazapyr 2SL** may be tank mixed with **Roundup** herbicide. Tank mixes with 2, 4-D, or products containing 2, 4-D, may reduce the performance of **Imazapyr 2SL**. Always follow the more restrictive label restrictions and precautions for all products used when tank mixing.

Spot Treatments. Imazapyr 2SL may be used as a follow-up treatment to control escapes or weed encroachment in a bareground situation. To prepare the spray solution, thoroughly mix in each gallon of water 0.5% to 5% **Imazapyr 2SL** plus an adjuvant. For increased burndown, include **Roundup** as a tank mixture. For added residual weed control, or to increase the weed spectrum, add **Pendulum Aquacap herbicide**, **Overdrive® herbicide** or diuron. Always follow the more restrictive label restrictions and precautions for all products when tank mixing.

FOR CONTROL OF UNDESIRABLE WEEDS UNDER PAVED SURFACES

Imazapyr 2SL can be used under asphalt, pond liners and other paved areas, **ONLY** in industrial sites or where the pavement has a suitable barrier along the perimeter that prevents encroachment of roots of undesirable plants.

Use **Imazapyr 2SL** only where the area to be treated has been prepared according to good construction practices. If rhizomes, stolons, tubers or other vegetative plant parts are present in the site, remove them by scalping with a grader blade to a depth sufficient to ensure their complete removal.

IMPORTANT: Follow **Imazapyr 2SL** applications with paving as soon as possible. **DO NOT** apply where the chemical may contact the roots of desirable trees or other plants.

Do not use this product under pavement on residential properties, such as driveways or parking lots, or for use in recreational areas, such as under bike or jogging paths, golf cart paths, or tennis courts, or where landscape plantings could be anticipated.

Injury or death of desirable plants may result if this product is applied where roots are present or where roots may extend into the treated area. Roots of trees and shrubs may extend a considerable distance beyond the branch extremities (drip line).

Apply to the soil surface only when final grade is established. **DO NOT** move soil following **Imazapyr 2SL** application.

Apply **Imazapyr 2SL** in sufficient water (at least 100 gallons per acre) to ensure thorough and uniform wetting of the soil surface, including the shoulder areas. Add **Imazapyr 2SL** at a rate of 6 pints per acre (2.2 fluid ounces per 1000 square feet) to clean water in the spray tank during the filling operation. Agitate before spraying.

If the soil is not moist prior to treatment, incorporation of **Imazapyr 2SL** is needed for herbicide activation. Incorporate **Imazapyr 2SL** into the soil to a depth of 4 to 6 inches using a rototiller or disc. Rainfall or irrigation of 1 inch will also provide uniform incorporation. **DO NOT** allow treated soil to wash or move into untreated areas.

Spot Treatments and Crack and Crevice Treatments*
Use **Imazapyr 2SL** as an initial or follow-up treatment to control weed escapes or weed encroachment in a bareground situation, including cracks and crevices in paved surfaces such as roadways, runways, and parking areas.
*Use not permitted in California unless otherwise directed by supplemental labeling.

AQUATIC WEED CONTROL

Imazapyr 2SL may be applied for the control of floating and emergent undesirable vegetation (see the **Aquatic Weeds Controlled** and the **Terrestrial Weeds Controlled by Imazapyr 2SL** section) in or near bodies of water that may be flowing, non-flowing, or transient. **Imazapyr 2SL** may be applied to aquatic sites that include lakes, rivers, streams, ponds, seeps, drainage ditches, canals, reservoirs, swamps, bogs, marshes, estuaries, bays, brackish water, transitional areas between terrestrial and aquatic sites, riparian sites, and seasonal wet areas. See **PRODUCT USE PRECAUTIONS AND RESTRICTIONS** section of this label for precautions, restrictions, and instructions on aquatic uses.

Read and observe the following directions if aquatic sites are present in non-crop areas and are part of the intended treatment area:

Imazapyr 2SL must be applied to the emergent foliage of the target vegetation and has little-to-no activity on submerged aquatic vegetation. **Imazapyr 2SL** concentrations resulting from direct application to water are not expected to be of sufficient concentration nor duration to provide control of target vegetation. Application should be made in such a way as to maximize spray interception by the target vegetation while minimizing the amount of overspray that enters water.

Imazapyr 2SL does not control plants that are completely submerged or have a majority of their foliage under water.

Imazapyr 2SL should be applied with surface or helicopter application equipment in a minimum of 2 gallons of water per acre. When applying by helicopter, follow directions under the **AERIAL APPLICATIONS** section of this label; otherwise, refer to the section on **GROUND APPLICATIONS** when using surface equipment.

Make applications to moving bodies of water while traveling upstream to prevent concentration of this herbicide in water. **DO NOT** apply to bodies of water or portions of bodies of water where emergent and/or floating weeds do not exist.

When application is to be made to target vegetation that covers a large percentage of the surface area of impounded water, treating the area in strips may avoid oxygen depletion due to decaying vegetation. Oxygen depletion may result in the suffocation of some sensitive aquatic organisms. If oxygen depletion

is a concern, treat no more the ½ of the surface area of the water in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outward in bands to allow aquatic organisms to move into untreated areas.

Avoid washoff of sprayed foliage by spray boat or recreational boat backwash for 1 hour after application.

Apply **Imazapyr 2SL** at 2 to 6 pints per acre depending on species present and weed density. DO NOT exceed the maximum label rate of 6 pints per acre (1.5 lbs ae/A) per year. Use the higher labeled rates for heavy weed pressure. Consult the **Aquatic Weeds Controlled** section and the **Terrestrial Weeds Controlled by Imazapyr 2SL** section of this label for specific rates.

Imazapyr 2SL may be applied as a draw-down treatment in areas described above. Apply **Imazapyr 2SL** to weeds after water has been drained and allow 14 days before reintroduction of water.

WEEDS CONTROLLED

Aquatic Weeds Controlled

Imazapyr 2SL will control the following target species as specified in the **Instructions** part of the table. Rates are expressed in terms of product volume for broadcast applications and as a % solution for directed applications including spot treatments. **For % solution applications, DO NOT apply more than the equivalent of 6 pints of Imazapyr 2SL per acre.**

Common Name	Scientific Name	Instructions
Floating		
*Floating Heart	*Nymphodes* spp.	2 to 4 pints/A (0.5 to 1.0%) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Frogbit	*Limnobium spongia*	1 to 2 pints/A (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Spatterdock	*Nuphar luteum*	Apply a tank mix of 2 to 4 pints/A **Imazapyr 2SL** + 4 to 6 pints/A glyphosate (0.5% **Imazapyr 2SL** +1.5% glyphosate) in 100 GPA water for best control. Ensure 100% coverage of actively growing emergent foliage.
*Water hyacinth	*Eichhornia crassipes*	1 to 2 pints/A (0.5% solution) applied in 100 GPA water to actively growing foliage.
*Water lettuce	*Pistia stratiotes*	1 to 2 pints/A (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
Emerged		
*Alligatorweed	*Alternanthera philoxeroides*	1 to 4 pints/A (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Arrowhead, duck-potato	*Sagittaria* spp.	1 to 2 pints/A (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Bacopa, lemon	*Bacopa* spp.	1 to 2 pints/A (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.

Common Name	Scientific Name	Instructions
*Parrot, feather	*Myriophyllum aquaticum*	Must be foliage above water for sufficient **Imazapyr 2SL** uptake. Apply 2 to 4 pints/A to actively growing emergent foliage.
*Pennywort	*Hydrocotyle* spp.	1 to 2 pints/A (0.5% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Pickerelweed	*Pontederia cordata*	2 to 3 pints/A (1% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Taro, wild Dasheen Elephant's ear Coco yam	*Colocasia esculentum*	4 to 6 pints/A (1.5% solution) applied in 100 GPA with a high quality "sticker" adjuvant. Ensure good coverage of actively growing emergent foliage.
*Water lily	*Nymphaea odorata*	2 to 3 pints/A (1% solution) applied in 100 GPA water mix. Ensure 100% coverage of actively growing emergent foliage.
*Water primrose	*Ludwigia uruguayensis*	4 to 6 pints/A (1.5% solution). Ensure 100% coverage of actively growing emergent foliage. Do not tank mix with glyphosate as this tank mixture may reduce water primrose control.
Terrestrial/Marginal		
*Soda apple, Aquatic nightshade	*Solanum tampicense*	2 pints/A applied to foliage.
*Bamboo, Japanese	*Phyllostachys* spp.	3 to 4 pints/A applied to the foliage when plant is actively growing; before setting seed head. More foliage will result in greater herbicide uptake, resulting in greater root kill.
*Beach, vitex	*Vitex rotundifolia*	5% solution + 1% MSO foliar spray. 17% solution stem injection (hack and squirt)
Brazilian pepper Christmasberry	*Schinus terebinthifolius*	2 to 4 pints/A applied to foliage.
Cattail	*Typha* spp.	2 to 4 pints/A (1% solution) applied to actively growing green foliage after full leaf elongation. Lower rates will control cattail in the North; higher rates are needed in the South.
Chinese tallow tree	*Sapium sebiferum*	16 to 24 ozs/A applied to foliage.
Cogon grass	*Imperata cylindrica*	Burn foliage, till area; then fall-spray 2 quarts/A **Imazapyr 2SL** + MSO applied to new growth.
Cordgrass, prairie	*Spartina* spp.	4 to 6 pints/A applied to actively growing foliage
*Cutgrass	*Zizaniopsis miliacea*	4 to 6 pints/A applied to actively growing foliage
*Elephant grass Napier grass	*Pennisetum purpureum*	3 pints/A applied to actively growing foliage
*Flowering rush	*Butumu typla*	2 to 3 pints/A applied to actively growing foliage
Giant reed Wild cane	*Arundo donax*	4 to 6 pints/A applied in spring to actively growing foliage
*Golden bamboo	*Phyllostachys aurea*	3 to 4 pints/A applied to foliage when plant

Common Name	Scientific Name	Instructions
		is actively growing; before setting seed head. More foliage will result in greater herbicide uptake, resulting in greater root kill.
Junglerice	*Echinochloa colonum*	3 to 4 pints/A applied to actively growing foliage.
Knapweeds	*Centaurea species*	Russian knapweed: 2 to 3 pints + 1 quart/A MSO fall-applied after senescence begins
Knotweed, Japanese (see *Fallopia japonica*)	*Polygonum cuspidatum*	3 to 4 pints/A applied postemergence to actively growing foliage
Melaleuca Paperbark tree	*Melaleuca quinquenervia*	For established stands, apply 6 pints/A **Imazapyr 2SL** + 6 pints/A glyphosate + spray adjuvant. For best results, use 4 quarts/A methylated seed oil as an adjuvant. For ground foliar application, uniformly apply to ensure 100% coverage. For broadcast foliar control, apply aerially in a minimum of 2 passes at 10 gallons/A applied cross treatment. For spot treatment, use a 25% **Imazapyr 2SL** + 25% solution of glyphosate + 1.25% MSO in water applied as a frill or stump treatment.
*Nutgrass Kili'p'opu	*Cyperus rotundus*	2 pints **Imazapyr 2SL** + 1 quart/A MSO applied early postemergence
*Nutsedge	*Cyperus* spp.	2 to 3 pints postemergence to foliage or preemergence incorporated, non-incorporated, preemergence applications will not provide control.
Phragmites Common reed	*Phragmites australis*	4 to 6 pints/A applied to actively growing green foliage after full leaf elongation. Ensure 100% coverage. If stand has a substantial amount of old stem tissue, mow or burn, allow to regrow to approximately 5 feet tall before treatment. Lower rates will control phragmites in the North; higher rates are needed in the South.
*Poison hemlock	*Corium maculatum*	2 pints **Imazapyr 2SL** herbicide + 1 quart/A MSO applied preemergence to early postemergence to rosette prior to flowering.
Purple loosestrife	*Lythrum salicaria*	1 pint/A applied to actively growing foliage
Reed Canarygrass	*Phalaris arundinacea*	3 to 4 pints/A applied to actively growing foliage
Rose, Swamp	*Rosa palustris*	2 to 3 pints/A applied to actively growing foliage
Russian olive	*Elaeagnus angustifolia*	2 to 4 pints/A or a 1% solution applied to foliage
Saltceder Tamarisk	*Tamarix* spp.	Aerial apply 2 quarts **Imazapyr 2SL** + 0.25% v/v NIS applied to actively growing foliage during flowering. For spot spraying, use 1% solution of **Imazapyr 2SL** + 0.25% v/v NIS and spray to wet foliage. After application, wait at least 2 years before

Common Name	Scientific Name	Instructions
		disturbing treated saltcedar. Earlier disturbance can reduce overall control.
Smartweed	*Polygonum* spp.	2 pints/A applied early postemergence
Sumac	*Rhus* spp.	2 to 3 pints/A applied to foliage
Swamp morningglory Water spinach Kangkong	*Ipomoea aquatic*	1 to 2 pints/A **Imazapyr 2SL** + 1 quart/A MSO applied early postemergence
Torpedo grass	*Panicum repens*	4 pints/A (1 to 1.5% solution); ensure good coverage to actively growing foliage
*White top Hoary cress	*Cardaria draba*	1 to 2 pints/A applied in spring to foliage during flowering
Willow	*Salix* spp.	2 to 3 pints/A **Imazapyr 2SL** applied to actively growing foliage. Ensure good coverage.

***Use not permitted in California unless otherwise directed by supplemental labeling.**

Terrestrial Weeds Controlled by Imazapyr 2SL herbicide
In terrestrial sites, **Imazapyr 2SL** will provide preemergence or postemergence control with residual control of the following target vegetation species at the rates listed. Residual control refers to control of newly germinating seedlings in both annuals and perennials. In general, annual weeds may be controlled by preemergence or postemergence applications of **Imazapyr 2SL. For established biennials and perennials, make postemergence applications of Imazapyr 2SL.**

The rates shown below pertain to broadcast applications and indicate the relative sensitivity of these weeds. The relative sensitivity should be referenced when preparing low-volume spray solutions (see **Low-volume Foliar Application** sections of **GROUND APPLICATIONS**); low-volume applications may provide control of the target species with less **Imazapyr 2SL** per acre than is shown for the broadcast treatments. Use **Imazapyr 2SL** only in accordance with the directions on this label.

The relative sensitivity of the following species listed can also be used to determine the relative risk of causing nontarget plant injury if any of the following species listed are considered to be desirable within the area to be treated.

Resistant Biotypes. Naturally occurring biotypes (a plant within a given species that has a slightly different by distinct genetic makeup from other plants of the same species) of some weeds listed on this label may not be effectively controlled. If naturally occurring, resistant biotypes are present in an area, **Imazapyr 2SL** should be tank mixed or applied sequentially with an appropriate registered herbicide having a different mode of action to ensure control.

GRASS WEEDS

COMMON NAME	SPECIES	GROWTH HABIT[2]
	Apply 2 to 3 pints per acre[1]	
Annual bluegrass	*(Poa annua)*	A
Broadleaf Signalgrass	*(Brachiaria platyphylla)*	A
Canada bluegrass	*(Poa compressa)*	P
Downy brome	*(Bromus tectorum)*	A
Fescue	*(Festuca* spp.*)*	A/P
Foxtail	*(Setaria* spp.*)*	A
Italian ryegrass	*(Lolium multiflorum)*	A
Johnsongrass	*(Sorghum halepense)*	P
Kentucky bluegrass	*(Poa pratensis)*	P

Lovegrass	*(Eragrostis* spp.*)*	A/P
*Napier grass	*(Pennisetum purpureum)*	P
Orchardgrass	*(Dactylis glomerata)*	P
Paragrass	*(Brachiaria mutica)*	P
Quackgrass	*(Agropyron repens)*	P
Sandbur	*(Cenchrus* spp.*)*	A
Sand dropseed	*(Sporobolus cryptandrus)*	P
Smooth brome	*(Bromus inermis)*	P
Vaseygrass	*(Paspalum urvillei)*	P
Wild oats	*(Avena fatua)*	A
Witchgrass	*(Panicum capillare)*	A

***Use not permitted in California unless otherwise directed by supplemental labeling.**

Apply to 3 to 4 pints per acre[1]		
Barnyardgrass	*(Echinochloa crus-gali)*	A
Beardgrass	*(Andropogon* spp.*)*	P
Bluegrass, annual	*(Poa annua)*	A
*Bulrush	*(Scirpus validus)*	P
Cheat	*(Bromus secalinus)*	A
Crabgrass	*(Digitaria* spp.*)*	A
Crowfootgrass	*(Dactyloctenium aegyptium)*	A
Fall Panicum	*(Panicum dichotomiflorum)*	A
Goosegrass	*(Eleusine indica)*	A
Itchgrass	*(Rottboellia exaltata)*	A
Lovegrass	*(Eragrostis* spp.*)*	A
*Maidencane	*(Panicum hemitomon)*	A
Panicum, browntop	*(Panicum fasciculatum)*	A
Panicum, Texas	*(Panicum texanum)*	A
Prairie threeawn	*(Aristida oligantha)*	P
Sandbur, field	*(Cenchrus incertus)*	A
Signalgrass	*(Brachiaria platyphylla*	A
Wild barley	*(Hordeum spp.)*	A
Wooly Cupgrass	*(Eriochloa villosa)*	A

***Use not permitted in California unless otherwise directed by supplemental labeling.**

Apply to 4 to 6 pints per acre[1]		
Bahiagrass	*(Paspalum notatum)*	P
Bermudagrass[3]	*(Cynodon dactylon)*	P
Big bluestem	*(Andropogon gerardii)*	P
Dallisgrass	*(Paspalum dilatatum)*	P
Feathertop	*(Pennisetum villosum)*	P
Guineagrass	*(Panicum maximum)*	P
Saltgrass[3]	*(Distichlis stricta)*	P
Sand dropseed	*(Sporobolus cryptandrus)*	P
Sprangletop	*(Leptochloa* spp.*)*	A
Timothy	*(Phleum pretense)*	P
Wirestem Muhly	*(Muhlenbergia frondosa)*	P

BROADLEAF WEEDS

COMMON NAME	SPECIES	GROWTH HABIT[2]
Apply 2 to 3 pints per acre[1]		
Burdock	*(Articum* spp.*)*	B
Carpetweed	*(Mollugo verticillata)*	A

COMMON NAME	SPECIES	GROWTH HABIT[2]
Apply 2 to 3 pints per acre[1]		
Carolina geranium	*(Geranium carolinianum)*	A
Clover	*(Trifolium* spp.*)*	A/P
Common chickweed	*(Stellaria media)*	A
Common ragweed	*(Ambrosia artemisiifolia)*	A
Dandelion	*Taraxacum officinale)*	P
Dogfennel	*(Eupatorium capillifolium)*	A
Filaree	*(Erodium* spp.*)*	A
Fleabane	*(Erigeron* spp.*)*	A
Hoary vervain	*(Verbena stricta)*	P
Indian mustard	*(Brassica juncea)*	A
Kochia	*(Kochia scoparia)*	A
Lambsquarters	*(Chenopodium album)*	A
*Lespedeza	*(Lespedeza* spp.*)*	P
Miner's lettuce	*(Montia perfoliata)*	A
Mullein	*(Verbascum* spp.*)*	B
Nettleleaf goosefoot	*(Chenopodium murale)*	A
Oxeye daisy	*(Chrysanthemum leucanthemum)*	P
Pepperweed	*(Lepidium* spp.*)*	A
Pigweed	*(Amaranthus* spp.*)*	A
Puncturevine	*(Tribulus terrestris)*	A
Russian thistle	*(Salsola kali)*	A
Smartweed	*(Polygonum* spp.*)*	A/P
Sorrell	*(Rumex* spp.*)*	P
Sunflower	*(Helianthus* spp.*)*	A
Sweet clover	*(Melilotus* spp.*)*	A/B
Tansymustard	*(Descurainia pinnata)*	A
Western ragweed	*(Ambrosia psilostachya)*	P
Wild carrot	*(Daucus carota)*	B
Wild lettuce	*(Lactuca* spp.*)*	A/B
Wild parsnip	*(Pastinaca sativa)*	B
Wild turnip	*(Brassica campestris)*	B
Woollyleaf bursage	*(Franseria tomentosa)*	P
Yellow woodsorrel	*(Oxalis stricta)*	P

***Use not permitted in California unless otherwise directed by supplemental labeling.**

Apply 3 to 4 pints per acre[1]		
Broom snakeweed[4]	*(Gutierrezia sarothrae)*	P
Bull thistle	*(Cirsium vulgare)*	B
Burclover	*(Medicago* spp.*)*	A
Chickweed, mouseear	*(Cerastium vulgatum)*	A
Clover, hop	*(Trifolium procumbens)*	A
Cocklebur	*(Xanthium strumarium)*	A
Cudweed	*(Gnaphalium* spp.*)*	A
Desert camelthorn	*(Alhagi pseudahagi)*	P
Dock	*(Rumex* spp.*)*	P
Fiddleneck	*(Amsinckia intermedia)*	A
Goldenrod	*(Solidago* spp.*)*	P
Henbit	*(Lamium aplexicaule)*	A
Knotweed, prostrate	*(Polygonum aviculare)*	A/P
Pokeweed	*(Phytolacca americana)*	P

Apply 3 to 4 pints per acre[1]		
Purslane	*(Portulaca spp.)*	A
Pusley, Florida	*(Richardia scabra)*	A
Rocket, London	*(Sisymbrium irio)*	A
Rush skeletonweed[4]	*(Chondrilla juncea)*	B
Saltbrush	*(Atriplex spp.)*	A
Shepherdspurse	*(Capsella bursa-pastoris)*	A
Spurge, annual	*(Euphorbia spp.)*	A
Stinging nettle[4]	*(Urtica dioica)*	P
Velvetleaf	*(Abutilon theophrasti)*	A
Yellow starthistle	*(Centaurea solstitialis)*	A

Apply to 4 to 6 pints per acre[1]		
Arrowwood	*(Pluchea sericea)*	A
Canada thistle	*(Cirsium arvense)*	P
Giant ragweed	*(Ambrosia trifida)*	A
Grey rabbitbrush	*(Chrysothemnus nauseosus)*	P
Little mallow	*(Malva parviflora)*	B
Milkweed	*(Asclepias spp.)*	P
Primrose	*(Cenothera kunthiana)*	P
Silverleaf nightshade	*(Solanum elaeagnifolium)*	P
Sowthistle	*(Sonchus spp.)*	A
Texas thistle	*(Cirsium texanum)*	P

VINES AND BRAMBLES

COMMON NAME	SPECIES	GROWTH HABIT[2]
Apply 1 pint per acre		
Field bindweed	*(Convolvulus arvensis)*	P
Hedge bindweed	*(Calystegia sepium)*	A

Apply 2 to 3 pints per acre[1]		
Wild buckwheat	*(Polygonum convolvulus)*	P

Apply 3 to 4 pints per acre[1]		
Greenbriar	*(Smilax spp.)*	P
Honeysuckle	*(Lonicera spp.)*	P
Morningglory	*(Ipomoea spp.)*	A/P
Poison ivy	*(Rhus radicans)*	P
Redvine	*(Brunnichia cirrhosa)*	P
Wild rose	*(Rosa spp.)*	P
Including:		
Multiflora rose	*(Rosa multiflora)*	P
Macartney rose	*(Rosa bracteata)*	P

Apply 4 to 6 pints per acre[1]		
*Kudzu[3]	*(Pueraria lobata)*	P
Trumpetcreeper	*(Campsis radicans)*	P
Virginia creeper	*(Parthenocissus quinquefolia)*	P
Wild grape	*(Vitis spp.)*	P

***Use not permitted in California unless otherwise directed by supplemental labeling.**

BRUSH SPECIES

Apply 4 to 6 pints per acre[1]		
Alder	*(Alnus* sp.*)*	P
American beech	*(Fagus grandfolia)*	P
Ash	*(Fraxinius* spp.*)*	P
Bald cypress	*(Taxodium distichum)*	P
Bigleaf maple	*(Acer macrophyllum)*	P
Black locust[5]	*(Robinia pseudoacacia)*	P
Black gum	*(Nyssa sylvatica)*	P
Boxelder	*(Acer negundo)*	P
Cherry	*(Prunus* spp.*)*	P
Chinaberry	*(Prunus* spp.*)*	P
Dogwood	*(Cornus* spp.*)*	P
Elm[6]	*(Ulmus* spp.*)*	P
Hawthorn	*(Crataegus* spp.*)*	P
Hickory	*(Carya* spp.*)*	P
Honeylocust[5]	*(Gleditsia triacanthos)*	P
Maple	*(Acer* spp.*)*	P
Mulberry	*(Morus* spp.*)*	P
Oak	*(Quercus* spp.*)*	P
Persimmon	*(Diospyros virginiana)*	P
*Pine[5]	*(Pinus* spp.*)*	P
Poplar	*(Populus* spp.*)*	P
Privet	*(Ligustrum vulgare)*	P
Red alder	*(Alnus rubra)*	P
Red maple	*(Acer rebrum)*	P
Russian olive	*(Elaeagnus angustifolia)*	P
Sassafras	*(Sassafras albidum)*	P
Sourwood	*(Oxydendrum arboreum)*	P
Sweetgum	*(Liquidambar styraciflua)*	P
*Water willow	*(Justica americana)*	P
Willow	*(Salix* spp.*)*	P
Yellow poplar	*(Liriodendron tulipifera)*	P

[1]Use the higher rates where heavy or well-established infestations occur.
[2]Growth Habit: A = Annual, B = Biennial, P = Perennial
[3]Use a minimum of 75 GPA. Control of established stands may require repeat applications.
[4]For best results, early postemergence applications are required.
[5]Tank mix with glyphosate or triclopyr.
[6]Tank mix with glyphosate.
***Use not permitted in California unless otherwise directed by supplemental labeling.**

SITE PREPARATION TREATMENT

CONIFER SITE PREPARATION TREATMENTS

Imazapyr 2SL 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./Acre)
Loblolly Pine (*Pinus taeda*)	48 – 80
Loblolly X Pitch Hybrid	48 – 80
Longleaf Pine (*Pinus palustris*)	48 – 80
Shortleaf Pine (*Pinus echinata*)	48 – 80

Crop Species	Rate (fl. oz./Acre)
Virginia Pine (*Pinus virginianae*)	48 – 80
Slash Pine (*Pinus elliottii*)	40 – 64
Douglas Fir (*Pseudotsuga menziesii*)	24 – 48
Incense Cedar (*Libocedrus decurrens*)	24 - 48
Larch (*Larix* spp.)	24 – 48
Western Hemlock (*Tsuga heterophylla*)	24 - 48
*Western Red Cedar (*Thuja plicata*)	24 – 48
Coast Redwood (*Sequoia sempervirens*)	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
Red Pine (*Pinus resinosa*)[2]	24 – 32
Sugar Pine (*Pinus lamertiana*)	24 - 32
White Pine (*Pinus strobes*)	24 – 32
Black Spruce (*Picea mariana*)[1]	24 – 32
Red Spruce (*Picea rubens*)	24 – 32
White Spruce (*Picea glauca*)[1]	24 - 32

[1] **DO NOT** plant seedlings of black spruce (*Picea mariana*) or white spruce (*Picea glauca*) on sites that have been site prepared with a broadcast application of **Imazapyr 2SL** or into the treated zone of spot or banded site preparation applications for three months following treatment or injury may occur.

[2] **DO NOT** plant seedlings of Red Pine (*Pinus resinosa*) on sites that have been site prepared with a broadcast application of **Imazapyr 2SL** or into the treated zone of spot or banded site preparation applications for six months following treatment or injury may occur.

*Use not permitted in California unless otherwise directed by supplemental labeling.

Use the specified rate of **Imazapyr 2SL** 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.

For tracts to be planted with loblolly, loblolly x pitch hybrid, longleaf pine, shortleaf pine, Virginia pine and slash pine, **Imazapyr 2SL** may be applied at a rate of 64 oz per acre on areas that have little to no resprouting vegetation because of recent management activities such as harvesting, mechanical shearing, burning piling or bedding. Applications must be made after September 1.

MIXING and APPLICATION INSTRUCTIONS for SITE PREPARATION:

Apply the specified rate of **Imazapyr 2SL** per acre in 5 to 20 gallons of 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 **Imazapyr 2SL** in 12 to 50% oil:water (volume:volume) emulsion carrier. Use methylated or ethylated seed oils containing at least 50% esterified seed oil by volume. Mix **Imazapyr 2SL** 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 **Imazapyr 2SL** and higher spray volumes when controlling particularly dense or multi-layered canopies or 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 **Imazapyr 2SL** in certain cases. Observe all precautions and restrictions on the product labels. Always follow the most restrictive label. Combinations with other products labeled for forest site preparation may kill certain plants such as legumes and blackberry, which are desirable for wildlife habitat.

DO NOT plant seedlings of black spruce (*Picea mariana*) or white spruce (*Picea glauca*) on sites that have been site prepared with a broadcast application of **Imazapyr 2SL** or into the treated zone of spot or banded site preparation applications for three months following treatment or injury may occur.

HELICOPTER SPRAY EQUIPMENT

All precautions should 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.

HARDWOOD SITE PREPARATION TREATMENTS

For site preparation prior to planting hardwood species in the southeast and gulf coast states (Virginia to Texas), use **Imazapyr 2SL** at a rate of 48 oz per acre and spray before the end of July. Apply in an emulsion carrier with a minimum of 12% oil. **DO NOT** plant hardwood seedlings before January of the year following site preparation or injury may occur.

DIRECTED FOLIAR APPLICATIONS FOR CONIFER RELEASE

Imazapyr 2SL 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 Imazapyr 2SL for release of the following conifers from hardwood competition:

Crop Species	Rate (fl. oz./Acre)
Loblolly Pine (*Pinus taeda*)	24 - 40
Loblolly X Pitch Hybrid	24 - 40
Virginia Pine (*Pinus virginianae*)	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
Coast Redwood (*Sequoia sempervirens*)	16 – 32
Incense Cedar (*Libocedrus decurrens*)	16 – 32
*Western Red Cedar (*Thuja plicata*)	16 - 32
White Pine (*Pinus strobes*)	16 - 32
Douglas Fir (*Pseudotsuga menziesii*)	16 - 24
Lodgepole Pine (*Pinus contorta*)	16 - 24
Black Spruce (*Picea mariana*)	12 - 24
Jack Pine (*Pinus banksiana*)	12 - 24
Red Spruce (*Picea rubens*)	12 - 24
White Spruce (*Picea glauca*)	12 – 24

*Use not permitted in California unless otherwise directed by supplemental labeling.

For applications directed to the foliage of undesirable brush mix 2 to 10% **Imazapyr 2SL** in water. For brush species with thick leaf cuticles or difficult to control species use oil emulsion carrier containing 12 to 50%, by volume, specified oil diluents. Apply the spray solution or emulsion to at least 2/3 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, use a 5% by volume **Imazapyr 2SL** solution or emulsion.

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 **Imazapyr 2SL** 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.

BAG AND BROADCAST APPLICATIONS FOR CONIFER RELEASE

In Douglas-fir and Ponderosa pine stands, broadcast applications of **Imazapyr 2SL** up to 32 oz per acre are permissible when the trees are covered by bags prior to the application. The bags must prevent the spray mix from contacting the conifer foliage. For improved control of brush species, particularly evergreens, add a suitable seed oil at 5 to 12% by volume. On sites with coarse textured soils (e.g. decomposed granite, pumice, sandy or rocky sites) or low levels of soil organic matter (generally 5% or less) significant conifer growth inhibition and mortality is possible. **DO NOT** use this treatment on these types of sites if conifer growth inhibition and mortality cannot be tolerated.

LATE ROTATION VEGETATION CONTROL IN WESTERN CONIFERS

In California, the Pacific Northwest and Inland Northwest, broadcast aerial applications of **Imazapyr 2SL** up to 48 oz per acre are permissible in conifer stands that are targeted for harvesting the year following treatment. Use a minimum spray volume of 15 gallons per acre. For improved control of brush species, particularly evergreens, add a suitable seed oil at 5 to 12% by volume. Significant conifer injury or mortality must be expected. **DO NOT** use this treatment if conifer injury or mortality cannot be tolerated.

UNDERSTORY BROADCAST APPLICATIONS FOR MID-ROTATION RELEASE

Imazapyr 2SL 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 **Imazapyr 2SL** 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.

Crop Species	Rate (fl. oz./Acre)
Loblolly Pine (*Pinus taeda*)	64
Loblolly X Pitch Hybrid	64
Virginia Pine (*Pinus virginianae*)	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 to 16.0 fluid ounces of **Imazapyr 2SL** in one gallon of water*, spring oil or food/feed seed oil. **Imazapyr 2SL** may be tank mixed with **Garlon® 3A, Garlon® 4, Tordon® K, Escort®** or **Roundup®** to control labeled species. Spray or brush the **Imazapyr 2SL** solution onto the cambium area of the freshly cut stump surface. Ensure that the **Imazapyr 2SL** 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.

***Note:** Use water as a diluent only when temperatures are sufficient to prevent freezing or add the 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 to 12.0 fluid ounces of **Imazapyr 2SL** in 1 gallon of water*. Using standard injection equipment, apply 1 ml. of **Imazapyr 2SL** 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.

***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 TREATMENTS

Mix 8.0 to 12.0 fluid ounces of **Imazapyr 2SL** in 1 gallon of water*, spring oil or food/feed seed oil.

Using a hatchet, machete, or similar tool, make cuts through the bark and completely around the tree with no more than 2 inch intervals between cut edges. Spray or brush the **Imazapyr 2SL** solution into each cut until thoroughly wet.

***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.

THINLINE BASAL AND STEM APPLICATIONS

Imazapyr 2SL 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 **Imazapyr 2SL** in one gallon of diesel oil or 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.

LOW VOLUME BASAL BARK TREATMENTS

Mix 8.0 to 12.0 fluid ounces of **Imazapyr 2SL** in one gallon of spring oil or food/feed seed oil. To control mixed brush species with up to 4 inch stem diameter at breast height, spray to wet the lower 12 to 18 inches of the stem with the **Imazapyr 2SL** oil mixture (include the root collar area). **DO NOT** over apply causing dripping or puddling. Maintain uniform mixtures with frequent agitation.

LOW VOLUME FOLIAR APPLICATIONS

Imazapyr 2SL may be applied as a low volume foliar application. Mix 3 to 5% **Imazapyr 2SL** 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 ensure coverage on as much of the crown as possible and spray at least two sides of the plant. **Imazapyr 2SL** may be tank mixed with other labeled herbicides. Use a tank mix of 3 to 5% **Imazapyr 2SL** plus 15 to 20% Garlon 4 in basal oil to control black locust, honey locust, hackberry, elms and other species listed on the manufacturer's labels. Use the higher rate of **Imazapyr 2SL** (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% **Imazapyr 2SL + Garlon® 4** or **Imazapyr 2SL** is effective in the Northeastern U.S.

SPRAY SOLUTION MIXING GUIDE FOR LOW VOLUME FOLIAR APPLICATIONS

AMOUNT OF SPRAY SOLUTION BEING PREPARED	DESIRED CONCENTRATION (fluid volume)			
	Imazapyr 2SL		Garlon 4	
	3%	5%	15%	20%
1 gallon	3.8 oz	6.4 oz	19.2 oz	25.6 oz
3 gallons	11.5 oz	19.2 oz	57.6 oz	76.8 oz
4 gallons	15.4 oz	25.6 oz	76.8 oz	102.4 oz
5 gallons	19.2 oz	32.0 oz	96.0 oz	1.0 gallon
50 gallons	1.5 gallons	2.5 gallons	7.5 gallons	10.0 gallons
100 gallons	3.0 gallons	5.0 gallons	15.0 gallons	20.0 gallons

INVERT EMULSIONS

Imazapyr 2SL 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** exceed 3 quarts/Acre of **Imazapyr 2SL.**

WEEDS CONTROLLED

Imazapyr 2SL 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 **Imazapyr 2SL** include the following:

Annual bluegrass (*Poa annua*)	Junglerice (*Echinochloa colonum*)
Bahiagrass (*Paspalum notatum*)	Kentucky bluegrass (*Poa pratensis*)
Barnyardgrass (*Echinochloa crus-galli*)	Lovegrass (*Eragrostis* spp.)
Beardgrass (*Andropogon* spp.)	Orchardgrass (*Dactylis glomerata*)
Bermudagrass (*Cynodon dactylon*)	*Panicum* spp.
Big bluestem (*Andropogon gerardii*)	Paragrass (*Brachiaria mutica*)
Broadleaf Signalgrass (*Brachiaria platyphylla*)	Phragmites (*Phragmites australis*)
Canada bluegrass (*Poa compressa*)	*Pinegrass (*Calamagrostis rubescens*)
Cattail (*Typha* spp.)	Prairie cordgrass (*Spartina pectinata*)
Cheat (*Bromus secalinus*)	Prairie threeawn (*Aristida oligantha*)
Cogongrass (*Imperata cylindrical*)[1]	Quackgrass (*Agropyron repens*)
Crabgrass (*Digitaria* spp.)	Reed canary grass (*Phalaris arundinacea*)
Crowfootgrass (*Dactyloctenium aegyptium*)	Saltgrass (*Distichlis stricta*)
Dallisgrass (*Paspalum dilatatum*)	Sand dropseed (*Sporobolus cryptandrus*)
Downy brome (*Bromus tectorum*)	Sandbur (*Cenchrus* spp.)
Fall panicum (*Panicum dichotomiflorum*)	Smooth brome (*Bromus inermis*)
Feathertop (*Pennisetum villosum*)	Sprangletop (*Leptochloa* spp.)
Fescue (*Festuca* spp.)	Timothy (*Phleum pratense*)
Foxtail (*Setaria* spp.)	Torpedograss (*Panicum repens*)
Giant reed (*Arundo donax*)	Vaseygrass (*Paspalum urvillei*)
Goosegrass (*Eleusine indica*)	Wild barley (*Hordeum* spp.)
Guineagrass (*Panicum maximum*)	Wild oats (*Avena fatua*)
Italian ryegrass (*Lolium multiflorum*)	Wirestem muhly (*Muhlenbergia frondosa*)

Itchgrass (*Rottboellia exaltata*)	Witchgrass (*Panicum capillare*)
Johnsongrass (*Sorghum halepense*)	Woolly Cupgrass (*Eriochloa villosa*)

* **Imazapyr 2SL** is not registered for use on pinegrass in California.
[1] Use a minimum of 48 oz per acre.

BROADLEAF WEEDS

The species of annual and perennial broadleaf weeds controlled by **Imazapyr 2SL** include the following:

Arrowwood (*Pluchea sericea*)	Nettleleaf goosefoot (*Chenopodium murale*)
Broom snakeweed (*Gutierrezia sarothrae*)	Oxeye daisy (*Chrysanthemum leucanthemum*)
Bull Thistle (*Cirsium vulgare*)	Pepperweed (*Lepidium* spp.)
Burclover (*Medicago* spp.)	Pigweed (*Amaranthus* spp.)
Burdock (*Arctium* spp.)	Plantain (*Plantago* spp.)
Camphorweed (*Heterotheca subaxillaris*)	Pokeweed (*Phytolacca americana*)
Carolina geranium (*Geranium carolinianum*)	Primrose (*Oenothera kunthiana*)
Carpetweed (*Mullugo verticillata*)	Punctureveine (*Tribulus terrestris*)
Chickweed, mouseear (*Cerastium vulgatum*)	Purple loosestrife (*Lythrum salicaria*)
Clover (*Trifolium* spp.)	Purslane (*Portulaca* spp.)
Cocklebur (*Xanthium strumarium*)	Pusley, Florida (*Richardia scabra*)
Common chickweed (*Stellaria media*)	Rocket, London (*Sisymbrium irio*)
Common ragweed (*Ambrosia artemisiifolia*)	Rush skeletonweed (*Chondrilla juncea*)
Cudweed (*Gnaphalium* spp.)	Russian knapweed (*Centaurea repens*)
Dandelion (*Taraxacum officinale*)	Russian thistle (*Salsola kali*)
Desert camelthorn (*Alhagi pseudalhagi*)	Saltbrush (*Atriplex* spp.)
Diffuse knapweed (*Centaurea diffusa*)	Shepherd's purse (*Capsella bursa-pastoris*)
Dock (*Rumex* spp.)	Silverleaf nightshade (*Solanum elaeagnifolium*)
Dogfennel (*Eupatorium capillifolium*)	Smartweed (*Polygonum* spp.)
Fiddleneck (*Amsinckia intermedia*)	Sorrell (*Rumex* spp.)
Filaree (*Erodium* spp.)	Sowthistle (*Sonchus* spp.)
Fleabane (*Erigeron* spp.)	Spurge, annual (*Euphorbia* spp.)
Giant ragweed (*Ambrosia trifida*)	Stinging nettle (*Urtica dioica*)
Goldenrod (*Solidago* spp.)	Sunflower (*Helianthus* spp.)
Gray rabbitbrush (*Chrysothamnus nauseosus*)	Sweet clover (*Melilotus* spp.)
Henbit (*Lamium aplexicaule*)	Tansymustard (*Descurainia pinnata*)
Hoary vervain (*Verbena stricta*)	Texas thistle (*Cirsium texanum*)
Horseweed (*Conyza canadensis*)	Velvetleaf (*Abutilon theophrasti*)
Indian mustard (*Brassica juncea*)	Western ragweed (*Ambrosia psilostachya*)
Japanese bamboo/knotweed (*Polygonum cuspidatum*)	Wild carrot (*Daucus carota*)
Knotweed, prostrate (*Polygonum aviculare*)	Wild lettuce (*Lactuca* spp.)
Kochia (*Kochia scoparia*)	Wild parsnip (*Pastinaca sativa*)
Lambsquarters (*Chenopodium album*)	Wild turnip (*Brassica campestris*)
Little mallow (*Malva parviflora*)	Woollyleaf bursage (*Ambrosia grayi*)
Milkweed (*Asclepias* spp.)	Yellow starthistle (*Centaurea solstitialis*)
Miners lettuce (*Montia perfoliata*)	Yellow woodsorrel (*Oxalis stricta*)
Mullein (*Verbascum* spp.)	

VINES AND BRAMBLES

The species of vines and brambles controlled by **Imazapyr 2SL** include the following:

Field bindweed (*Convolvulus arvensis*)	Trumpetcreeper (*Campsis radicans*)
Hedge bindweed (*Calystegia sequium*)	Virginia creeper (*Parthenocissus quinquefolia*)
Honeysuckle (*Lonicera* spp.)[1]	Wild buckwheat (*Polygonum convolvulus*)

Morningglory (*Ipomoea* spp.)	Wild grape (*Vitis* spp.)
Poison ivy (*Rhus radicans*)	Wild rose (*Rosa* spp.)[1] Including Multiflora rose (*Rosa multiflora*) Macartney rose (*Rosa bracteata*)
Redvine (*Brunnichia cirrhosa*)	

[1]Use higher labeled rates.

WOODY BRUSH AND TREES

The species of woody brush and trees controlled by **Imazapyr 2SL** include the following:

Alder (*Alnus* spp.)	Huckleberry (*Gaylussacia* spp.)
American beech (*Fagus grandfolia*)	Lyonia spp. Including Fetterbush (*Lyonia lucida*) Staggerbush (*Lyonia mariana*)
Ash (*Fraxinus* spp.)[1]	Madrone (*Arbutus menziesii*)
Aspen (*Populus* spp.)	Manzanita, greenleaf (*Arctostaphylos patula*)[4]
Australian pine (*Casuarina equisetifolia*)[5]	Maple (*Acer* spp.)
Autumn olive (*Elaeagnus umbellata*)	Melaleuca (*Melaleuca quinquenervia*)
Bald cypress (*Taxodium distichum*)[4]	Mulberry (*Morus* spp.)[1,3]
Bigleaf maple (*Acer macrophyllum*)[1]	Oak (*Quercus* spp.)[1,3]
Birch (*Betula* spp.)	Persimmon (*Diospyros virginiana*)[2]
Black locust (*Robinia pseudoacacia*)[5]	Poison oak (*Rhus diversiloba*)
Black oak (*Quercus kelloggii*)	Popcorn-tree (*Sapium sebiferum*)
Blackgum (*Nyssa sylvatica*)[2]	Poplar (*Populus* spp.)[2]
Boxelder (*Acer negundo*)	Privet (*Ligustrum vulgare*)
Brazilian peppertree (*Schinus terebinthifolius*)	Red alder (*Alnus rubra*)
Ceanothis (*Ceanothis* spp.)	Red maple (*Acer rubrum*)
Cherry (*Prunus* spp.)[1,2]	Saltcedar (*Tamarix pentandra*)
Chinaberry (*Melia azedarach*)	Sassafras (*Sassafras albidum*)
Chinese tallow-tree (*Sapium sebiferum*)	Scotch broom (*Cytisus scoparius*)[5]
Chinquapin (*Castanopsis chrysophylla*)[4]	Sourwood (*Oxydendrum arboretum*)[2]
Cottonwood (*Populus* spp.)	Sumac (*Rhus* spp.)
Cypress (*Taxodium* spp.)	Sweetbay magnolia (*Magnolia virginianae*)[1,4]
Dogwood (*Cornus* spp.)[1]	Sweetgum (*Liquidambar styraciflua*)
Elderberry (*Sambucus* spp.)[5]	Sycamore (*Platanus occidentalis*)
Elm (*Ulmus*)[5]	Tanoak (*Lithocarpus densiflorus*)[1,4,5]
Eucalyptus (*Eucalyptus* spp.)	TiTi (*Cyrilla racemiflora*)[1,4,6]
Hawthorn (*Crataegus* spp.)	Tree of heaven (*Ailanthus altissima*)
Hazel (*Corylus comuta*)[5]	Vaccinium spp. Including Blueberry (*Vaccinium* spp.) Sparkleberry (*Vaccinium arboretum*)
Hickory (*Carya* spp.)[1]	Waxmyrtle (*Myrica californica*)[1,4] (*Myrica cerifera*)[1,4]
Holly (*Ilex* spp.)[1,4] Including Gallberry (*Ilex glabra*) Tall gallberry (*Ilex coriacea*) Yaupon (*Ilex vomitoria*)	Willow (*Salix* spp.)
Honeylocust (*Gleditsia triacanthos*)[5]	Yellow-poplar (*Liriodendron tulipifera*)[1]

[1] Use higher labeled rates.
[2] Best control with applications prior to formation of fall leaf color.
[3] The degree of control may be species dependent.
[4] Use an oil emulsion carrier.
[5] Tank mix with **Garlon® 4** as a basal or cut stump treatment.
[6] Suppression only.

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:

[NONREFILLABLE CONTAINERS]: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying.

(Nonrefillable ≤ 5 gallons): 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 ¼ 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 if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(Nonrefillable > 5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

[REFILLABLE CONTAINERS]: 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 mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Steps to be taken in case material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

AmTide LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or AmTide LLC, and Buyer and

User assumes the risk of any such used. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, AMTIDE LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product in the event of ineffectiveness or other unintended consequences that may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of AmTide LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold AmTide LLC and Seller harmless for any claims relating to such factors.

To the extent consistent with applicable law, in no event shall AmTide LLC or Seller be liable for any incidental, consequential, or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER AND BUYER, AND THE EXCLUSIVE LIABILITY OF AMTIDE LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE, AT THE ELECTION OF AMTIDE LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT, OR COMPENSATION LIMITED TO DAMAGES NOT EXCEEDING THE FAIR MARKET PURCHASE PRICE, AND SHALL NOT INCLUDE INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

AmTide LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of AmTide LLC.

Overdrive and Pendulum are registered trademarks of BASF.
AquaCap is a trademark of BASF.
Accord, Garlon and Tordon are registered trademarks of Dow AgroSciences LLC.
Campaign and Roundup are registered trademarks of Monsanto Technology LLC.
Embark is a registered trademark of PBI/Gordon Corporation.
Escort and Krenite are registered trademarks of E.I. DuPont de Nemours and Company.
Microfoil is a trademark of Rhone Poulenc Ag Company.
Thru-Valve is a trademark of Waldrum Specialties.

EPA 20120209