

# U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Registration Division (7504P) Ariel Rios Building 1200 Pennsylvania Ave., NW Washington, D.C. 20460

EPA Registration
Number:

Date of Issuance:

34704-973

JUL 1 3 2011

NOTICE OF PESTICIDE:

X Registration

X Reregistration

Term of Issuance:

Unconditional

Name of Pesticide Product:

LPI Imazapyr Pro VM & Aquatic Herbicide

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Loveland Products, Inc.

P.O. Box 1286

Greeley, CO 80632-1286

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

EPA received a label amendment request submitted on July 8, 2011. EPA grants this request under the authority of section 3(c)(5) of the Federal Insecticide, Fungicide and Rodenticide Act, as amended. With this accepted labeling, all requirements set forth in the Reregistation Eligibility Decision (RED) for **Imazapyr** have been satisfied. Therefore, EPA reregisters the product listed above. This action is taken under the authority of section 4(g)(2)(c) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended. Reregistration under this section does not eliminate the need for continual reassessment of pesticides. EPA may require submission of data at any time to maintain the registration of your product.

Submit one (1) copy of final printed labeling. Amended labeling will supersede all previously accepted labels. A copy of your label stamped "Accepted" is enclosed for your records. Products shipped after twelve (12) months from the date of this Notice or the next printing of your label, whichever occurs first, must bear the new revised label.

If you have any questions regarding this Notice, please contact Mindy Ondish at (703)605-0723 or at ondish.mindy@epa.gov.

Signature of Approving Official:

Kable Bo Davis Product Manager 25 Herbicide Branch

Registration Division (7505P)

Date:

JUL 1 3 2011



# LPI Imazapyr Pro VM & Aquatic Herbicide

# **ACCEPTED**

JUL 1 3 2011

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under

EPA Reg. No. 34704-973

# LPI Imazapyr Pro VM & Aquatic Herbicide will control weeds, brush and undesirable aquatic vegetation in the following sites:

Non-Cropland Uses:

Fence Rows Wildlife Openings Industrial / Transportation Uses:

Transmission Lines

Tank Farms

Storage areas **Pipelines** Under paved surfaces

Aquatic / Wetland Uses:

Wetlands Estuaries

Riparian Zones

Roads

Marine Environments

Ditch Banks (non-irrigation only)

Bareground areas **Pumping Stations** 

Vegetation in surface water

NOTE: This product is NOT to be used on food crops or Christmas trees.

**ACTIVE INGREDIENT:** 

Isopropylamine salt of Imazapyr (2-[4,5-dihydro-4-methyl-4-(1methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid)\*

TOTAL

... 28.7%

\*Equivalent to 23.4% (2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid or 2 pounds acid per gallon.

# KEEP OUT OF REACH OF CHILDREN CAUTION — PRECAUCION

Si usted no entienda 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.)

> EPA REG. NO. 34704-973 EPA EST. NO. 34704-MS-001 NET CONTENTS 21/2 GALS. (9.46 L)

> > EXP 07/08

#### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: No human or domestic animal hazard statements are required. Follow instructions for Personal Protective Equipment and User Safety Recommendations. For a medical emergency involving this product call 1-866-944-8565. Have this product container or label with you when calling the poison control center or doctor, or going for treatment.

#### **ENVIRONMENTAL HAZARDS**

This product is toxic to plants. Drift and run-off may be hazardous to plants in water adjacent to treated areas. Do not apply to water except as specified on the label. Treatment of aquatic weeds may result in oxygen depletion or loss due to decomposition of dead plants.

Do not treat more than one half 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, washwater, or rinsate. See Directions for Use for additional precautions and requirements.

The use of treated waters on irrigated crops within 120 days of treatment is prohibited.

This herbicide is phytotoxic at extremely low concentrations. Non-target plants may be adversely affected from drift.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are made of any waterproof material. If you want more options, follow the instructions for category A on an EPA chemicalresistant category selection chart

# Mixers, loaders, applicators, and other handlers must wear:

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

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

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

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

#### **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.

#### PHYSICAL OR CHEMICAL HAZARDS

Mix, store and apply spray solutions of LPI Imazapyr Pro VM & Aquatic Herbicide only in stainless steel, fiberglass, plastic and plastic-lined steel containers.

DO NOT mix, store or apply LPI Imazapyr Pro VM & Aquatic Herbicide or spray solutions of LPI Imazapyr Pro VM & Aquatic Herbicide in unlined steel (except stainless steel) containers or spray tanks.

#### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide reg-

The following methods of application may be used to apply LPI Imazapyr Pro VM & Aquatic Herbicide: Fixed-wing aircraft (for brush control ONLY); Helicopters; Ground operated sprayers; Backpack and pump sprayers and; Tree injection equipment

IMPORTANT NOTE REGARDING AERIAL APPLICATIONS: Applications using fixed-wing aircraft may be made for brush control applications ONLY. Aerial applications to all other use sites including aquatic sites must be made using a helicopter. All other aerial applications (including aerial applications to aquatic sites) must not be made using fixed-wing aircraft and must be made by HELICOPTER only.

#### **ENTRY RESTRICTIONS:**

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

#### **USE PRECAUTIONS AND RESTRICTIONS**

- . Domestic use of this product is prohibited.
- Do not apply this product in a way that will contact any person or pet, either directly or through drift. Keep people and pets out of the area during application.
- . Do not apply this product to Christmas trees or to food crops.
- . Do not make any applications of this product to flowing water that is one-half mile or less upstream of an active potable water intake.
- . Do not make any applications of this product to standing water (such as lakes or reservoirs) that is one-half mile or less from an active potable water intake. See the Aquatic Applications section for specific instructions when making applications to water
- . To help prevent accidental exposure of desirable vegetation to this product, do not allow this product to come into contact with seeds, fertilizers, insecticides, and fungicides.
- . When flushing and draining equipment, do not allow rinsate to enter areas where sensitive or desirable plants or their roots may become exposed.
- Side trimming desirable vegetation with this product may cause severe injury or death of the treated plants
- · Prevent spray drift from coming in contact with desirable plants.
- To avoid spills and contamination, keep containers closed when not in use.
- Refer to the "Application to Waters Used for Irrigation" section of this label prior to treating irrigation ditches or water used for crop irrigation.
- The use of treated water on irrigated crops within 120 days of treatment is prohibited.

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#### **Specified Water Volumes:**

The spray volume used should be sufficient to create an accurate and uniform spray pattern over the area to be treated while minimizing spray drift. The spray equipment used will ultimately determine the actual minimum spray volume per acre.

#### **AERIAL APPLICATIONS:**

Use 2 or more gallons of water per acre unless otherwise directed on this label.

#### **GROUND APPLICATIONS (BROADCAST):**

Use 5 or more gallons of water per acre unless otherwise directed on this label.

#### **Aerial Application Restrictions:**

- 1. Applicators are required to use a coarse or coarser droplet size (ASABE S572) or, if specifically using a spinning atomizer nozzle, applicators are required to use a volume mean diameter (VMD) of 385 microns or greater for release heights below 10 feet. Applicators are required to use a very coarse or coarser droplet size or, if specifically using a spinning atomizer nozzle, applicators are required to use a VMD of 475 microns or greater for release heights above 10 feet. Applicators must consider the effects of nozzle
- orientation and flight speed when determining droplet size.

  2. Applicators are required to use upwind swath displacement.

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

#### **Ground Boom Application Restrictions:**

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

#### **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) restricted-entry interval, and notification to workers (as applicable). The requirements in this box 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 of 48 hours.

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

- · Chemical-resistant gloves made of any waterproof material,
- · Shoes plus socks,
- · Protective eyewear.

# **NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applied 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 INFORMATION

LPI Imazapyr Pro VM & Aquatic Herbicide is an aqueous solution that is prepared by mixing with water and a surfactant and applied by spraying. Plants readily absorb the product through both foliage and roots resulting in the stoppage of growth of treated plants shortly after application followed by yellowing of leaves (chlorosis) starting with the youngest vegetation. Tissue damage and death may not be obvious until several weeks after application and brush and trees may not indicate the full effects of the herbicide until several months after application. LPI Imazapyr Pro VM & Aquatic Herbicide accumulates in the meristematic regions of a plant; it also translocates to the roots, which helps in preventing perennial species from resprouting.

This product controls many brush and vine species as well as most annual and perennial grasses and broadleaf weeds. LPI Imazapyr Pro VM & Aquatic Herbicide also provides residual control of labeled weeds that germinate in the treated areas. While this product is most effective when applied post-emergence (especially for established biennial and perennial species), pre-emergence applications can be made when necessary. For maximum effect, applications should be made when the vegetation is vigorously growing. Use of a surfactant will also enhance the efficacy of this product and research indicates that use of methylated seed oils or vegetable oil concentrates may improve the efficacy of LPI Imazapyr Pro VM & Aquatic Herbicide in plants under moisture and / or temperature stress; refer to the "Adjuvants" section below for specific information on using surfactants with LPI Imazapyr Pro VM & Aquatic Herbicide.

Applications of LPI Imazapyr Pro VM & Aquatic Herbicide are rainfast one hour after treatment.

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Note Regarding Resistant Biotypes: Naturally occurring ALS/AHAS resistant biotypes of some weeds listed on this label may not be effectively controlled by LPI Imazapyr Pro VM & Aquatic Herbicide. If resistant biotypes are known to exist in the area to be treated, this product should be tank mixed or applied in addition to another herbicide with a different mode of action. Contact you local extension agent for information about resistant plants in you area.

## PRECAUTIONS FOR AVOIDING INJURY TO NON-TARGET PLANTS

Because LPI Imazapyr Pro VM & Aquatic Herbicide is absorbed by plants via their roots, desirable plants may be damaged or lost due to unintended root uptake from treated soil. To avoid injury to non-target plants, do not apply this product on or near desirable plants or to areas into which their roots may extend. Also, do not apply to soil that may be eroded or moved into contact with the roots of desirable plants.

Read and observe the directions in the Aquatic Applications section if aquatic sites are present in terrestrial noncrop areas and are part of the intended treatment area.

When applying in wet environments such as shorelines, plants with roots that may extend into the water are generally not affected by uptake of this product from the water.

Do not use vegetative matter that has been treated with this product as mulch or compost on or around desirable species.

The information that follows are instructions for managing and minimizing off-target exposure of this product. Specific use directions in this label may vary from these guidelines depending on the application method and objectives, and should supersede the information provided below.

Spray Drift: Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather related factors determine the potential for spray drift. The applicator and the entity authorizing spraying are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications:

- 1. The distance of the outer most operating nozzles must not exceed 34 the length of the rotor.
- 2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they must be observed.

Spray drift from applying this product may result in damage to sensitive plants adjacent to the treatment area. Only apply this product when the potential for drift to these and other adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or non-target crops) is minimal. Do not apply when the following conditions exist which increase the likelihood of spray drift from intended targets: high or gusty winds, high temperatures, low humidity, temperature inversions.

To minimize spray drift, the applicator should be familiar with and take into account the following drift reduction advisory information. Additional information may be available from state enforcement agencies or the Cooperative Extension on the application of this product.

The best drift management strategy and most effective way to reduce drift potential are to apply large droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see WIND, TEMPERATURE AND HUMIDITY, and TEMPERATURE INVERSIONS).

# Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the treatment area, the applicator must compensate for this displacement by adjusting the path of the application equipment (e.g. aircraft, ground) upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

#### Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

# 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.

MANAGING SPRAY DRIFT FROM AERIAL APPLICATIONS: Applicators must follow these requirements to avoid off-target drift movement: 1) boom length - the distance of the out-ermost nozzles on the boom must not exceed 34 the length of the wingspan or rotor, 2) nozzle orientation - nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees, and 3) application height - without compromising aircraft safety, applications should be made at a height of 10 feet or less above the crop canopy or tallest plants. Applicators must follow the most restrictive use precautions to avoid drift hazards, including those found in this labeling as well as applicable state and local regulations and ordinances.

#### MIXING AND APPLICATION INSTRUCTIONS HELICOPTER SPRAY

# **EQUIPMENT:**

Preparation: Add the amount of LPI Imazapyr Pro VM & Aquatic Herbicide specified in this label for the intended use to 5 - 30 gallons of water per acre, mixing thoroughly

Adjuvants: To increase efficacy, a compatible nonionic surfactant may be added to the spray solution

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Except when applying with a Microfoil™ boom, Thru-Valve™ Boom or other similar equipment, a drift control agent may be added.

If necessary, a foam reducing agent may also be added.

Application: Applications should not be made under windy or gusty conditions and all possible precautions should be taken in order to minimize or eliminate spray drift. Using a controlled droplet boom and nozzle configuration is recommended to assist in mitigating spray drift

Be sure to maintain adequate buffer zones.

Precautions: Because uncoated steel (except stainless steel) surfaces that experience prolonged exposure to this product may corrode and eventually fail, thoroughly clean application and mixing equipment as well as portions of the aircraft that may have been exposed to the spray (including landing gear) immediately after use by flushing with water.

#### GROUND OPERATED SPRAY EQUIPMENT:

Preparation: Add the amount of LPI Imazapyr Pro VM & Aquatic Herbicide specified in this label for the intended use to 5 - 100 gallons of water per acre, mixing thoroughly.

Adjuvants: To increase efficacy, a compatible nonionic surfactant may be added to the spray solution.

Except when applying with a Microfoil™ boom, Thru-Valve™ Boom or other similar equipment, a drift control agent may be added.

A spray pattern indicator may be added if desired.

If necessary, a foam reducing agent may also be added.

Application: Uniformly cover the foliage of the vegetation to be controlled with the spray solution.

Applications should not be made under windy or gusty conditions and all possible precautions should be taken in order to minimize or eliminate spray drift.

Be sure to maintain adequate buffer zones.

**Precautions:** Because uncoated steel (except stainless steel) surfaces that experience prolonged exposure to this product may corrode and eventually fail, thoroughly clean application and mixing equipment immediately after use by flushing with water.

#### DIRECTED FOLIAR OR SPOT SPRAY EQUIPMENT:

Preparation: Unless otherwise directed on this label, create a 1 - 5 percent by volume solution of LPI Imazapyr Pro VM & Aquatic Herbicide in water using the table below:

**SPRAY SOLUTION MIXING GUIDE** 

		Concentration		
Solution Volume	1%	2.5%	5%	Surfactant
1 gallon	1.3 oz.	3.25 oz.	6.5 oz.	1/3 OZ.
3 gallons	3.8 oz.	9.5 oz.	1.2 pints	1 oz.
4 gallons	5.1 oz.	12.75 oz.	1.6 pints	1 ¼ oz.
5 gallons	6.5 oz.	1 pint	1 quart	1 <sup>2</sup> /3 0Z.
10 gallons	13.0 oz.	1 quart	2 quarts	3 ¼ oz.
25 gallons	1 quart	2.5 quarts	1.25 gallons	8 oz.
50 gallons	2 quarts	1.25 gallons	2.5 gallons	1 pint
100 gallons	1 gallon	2.5 gallons	5 gallons	1 quart

% Solution	Amount LPI Imazapyr Pro VM & Aquatic Herbicide per Gallon of Mix	Amount LPI Imazapyr Pro VM & Aquatic Herbicide per 4 Gallon Backpack
0.5%	0.6 oz.	2.6 oz.
1.0%	1.3 oz.	5.1 oz.
1.5%	1.9 oz.	7.7 oz.
2.0%	2.6 oz.	10.2 oz.
2.5%	3.2 oz.	12.8 oz.
3.0%	3.8 oz.	15.4 oz.
5.0 %	6.4 oz.	25.6 oz.

2 tablespoons = 1 fluid ounce

 $\label{eq:Adjuvants: A minimum of 14 percent by volume nonionic surfactant should be added to the spray solution using the last column of the above table.}$ 

A spray pattern indicator may be added if desired.

If necessary, a foam reducing agent may also be added.

Application: Uniformly cover the foliage of the vegetation to be controlled with the spray solution. 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. Moisten, but do not drench target vegetation causing spray solution to run off.

Tips such as a 4004E or 1540E that produce an even, flat spray pattern with a spray angle of 40 degrees or less will help to produce ideal deposition on the vegetation. For a straight stream and cone pattern, adjustable cone nozzles such as the 5500 X3 or 5500 X4 may be used.

Applications should not be made under windy or gusty conditions and all possible precautions should be taken in order to minimize or eliminate spray drift.

Be sure to maintain adequate buffer zones.

Precautions: DO NOT exceed Specified dosage rate per acre.

DO NOT apply to the point of runoff from the treated foliage.

Injury may occur to desirable conifers or other plant species if applications are made directly to those plants.

Because uncoated steel (except stainless steel) surfaces that experience prolonged exposure to this product may corrode and eventually fail, thoroughly clean application and mixing equipment immediately after use by flushing with water.

#### **ADJUVANT**

When making postemergence applications of LPI Imazapyr Pro VM & Aquatic Herbicide, a spray adjuvant must be used.

NOTE: When applying to aquatic sites listed in this label, the adjuvant must be approved for aquatic uses.

Nonionic Surfactants: Add at a 0.25% v/v or higher rate of the spray solution as directed by the manufacturer (NOTE: 0.25% v/v is equivalent to 1 quart in 100 gallons). Nonionic surfactants that have a HLB (hydrophilic to lipophilic balance) ratio between 12 - 17 and a formulated product consisting of at least 70% surfactant will provide the best results.

Methylated Seed Oils or Vegetable Oil Concentrates: Methylated seed oil or vegetable-based seed oil concentrate may be used in place of a surfactant, and research indicates that use of these oils may improve the efficacy of LPI Imazapyr Pro VM & Aquatic Herbicide in plants under moisture and / or temperature stress. Use a rate of 1.5 to 2 pints per acre, or when using spray volumes greater than 30 gallons per acre use a rate of 1% of the total spray volume.

Silicone Based Surfactants: Silicon-based surfactants may cause greater spreading of droplets on the leaf surface than conventional nonionic surfactants, but may also dry more quickly limiting herbicide uptake. These surfactants should be used at the rates specified in the manufacturer's label.

**Invert Emulsions:** LPI Imazapyr Pro VM & Aquatic Herbicide can be applied as an invert (water-in-oil) spray emulsion that will minimize spray drift and spray run-off. The invert spray emulsion may be batch mixed or injected (in-line mixing); consult the label of the invert chemical for instructions on mixing.

Fertilizer/Surfactant Blends: Nitrogen based liquid fertilizers may be used in combination with nonionic, methylated seed oil or vegetable oil concentrate surfactants. Tank mixing fertilizers without a surfactant is not advised. Apply at a rate of 2 - 3 pints per acre.

If desired, other adjuvants such as spray pattern indicators or additives for reducing foaming or spray drift may be added to the mix. See the label(s) of the respective product(s) for specific instructions and application rates.

#### **WEEDS CONTROLLED**

LPI Imazapyr Pro VM & Aquatic Herbicide controls the following weeds. Use the rates listed below for preemergence or postemergence control, as well as residual control of both Annuals and Perennials (listed under the "Life Cycle" column). For heavy or well established infestations, use the higher rates listed. These tables are based on broadcast treatments and in general, when making low-volume applications use the lower rates listed. Application rates listed are pints of LPI Imazapyr Pro VM & Aquatic Herbicide per acre.

Scientific Name

Life Cycle

Application Rate

(Pints / Acre)

# GRASSES Common Name

Annual Bluegrass	Poa annua	A	2.0 - 3.0
Bahiagrass	Paspalum notatum	Р	4.0 - 6.0
Barnyardgrass†	Echinochloa crus-gali	A	3.0 - 4.0
Beardgrass	Andropogon spp.	P	3.0 - 4.0
Bermudagrass‡	Cynodon dactylon	P	4.0 - 6.0
Big bluestern	Andropogon gerardii	P	4.0 - 6.0
Bluegrass, Annual†	Poa annua	A	3.0 - 4.0
Broadleaf signalgrass	Brachiaria platyphylla	Α	2.0 - 3.0
Bulrush	Scirpus validus	P	3.0 - 4.0
Canada bluegrass	Poa compressa	. Р	2.0 - 3.0
Cattail	Typha spp.	P	4.0 - 6.0
Cheat	Bromus secalinus	A	3.0 - 4.0
Cogongrass	Imperata cylindrica	P	4.0 - 6.0
Crabgrass	Digitaria spp.	A	3.0 - 4.0
Crowfootgrassf	Dactyloctenium aegyptium	A	3.0 - 4.0
Dallisgrass	Paspalum dilatatum	P	4.0 - 6.0
Downy brome	Bromus tectorum	A	2.0 - 3.0
Fall panicum	Panicum dichotomiflorum	A	3.0 - 4.0
Feathertop	Pennisetum villosum	Р .	4.0 - 6.0
Fescue	Festuca spp.	A/P	2.0 - 3.0
Foxtail	Setaria spp.	A	2.0 - 3.0
Giant Reed	Arundo donax	A	3.0 - 4.0
Goosegrass	Eleusine indica	A	· 3.0 - 4.0
Guineagrass	Panicum maximum	Р	4.0 - 6.0
Italian ryegrass	Lolium multiflorum	Α	2.0 - 3.0
ltchgrass†	Rottboellia exaltata	A	3.0 - 4.0
Johnsongrass	Sorghum halepense	P	2.0 - 3.0
Junglericet	Echinochloa colonum	Α	3.0 - 4.0
Kentucky bluegrass	Poa pratensis	P	2.0 - 3.0
Lovegrass	Eragrostis spp.	A/P	2.0 - 3.0
Lovegrass†	Eragrostis spp.	Α_	3.0 - 4.0
Maidencane	Panicum hemitomon	A	3.0 - 4.0
Napier grass	Pennisetum purpureum	P	2.0 - 3.0
Orchardgrass	Dactylis glomerata	P	2.0 - 3.0
Panicum, Browntop†	Panicum fasciculatum	A	3.0 - 4.0
Panicum Texas†	Panicum texanum	A	3.0 - 4.0
Paragrass	Brachiaria mutica	P	2.0 - 3.0
Phragmites	Phragmites australis	P	4.0 - 6.0
Prairie cordgrass	Spartina pectinata	P	4.0 - 6.0
Prairie threeawn	Aristida oligantha	P	3.0 - 4.0
Quackgrass	Agropyron repens	P	2.0 - 3.0

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Common Name	Scientific Name	Life Cycle	Application Rate (Pints / Acre)
Reed canarygrass	Phalaris arundinacea	P	3.0 - 4.0
Saltgrass <sup>‡</sup>	Distichlis stricta	P	4.0 - 6.0
Sand dropseed	Sporobulus cryptandrus	A	2.0 - 3.0
Sand dropseed	Sporobolus cryptandrus	P	4.0 - 6.0
Sandbur	Cenchrus spp.	A	2.0 - 3.0
Sandbur, Field†	Cenchrus incertus	A	3.0 - 4.0
Signalgrass†	Brachiaria platyphylla	A	3.0 - 4.0
Smooth brome	Bromus inermis	P	2.0 - 3.0
Sprangletop†	Leptochloa spp.	A	4.0 - 6.0
Timothy	Phleum pretense	P	4.0 - 6.0
Torpedograss	Panicum repens	P	3.0 - 4.0
Vaseygrass	Paspalum urvillei	P	2.0 - 3.0
Wild barley	Hordeum spp.	A	3.0 - 4.0
Wild oats	Avena fatua	A	2.0 - 3.0
Wirestern muhly	Muhlenbergia frondosa	P	4.0 - 6.0
Witchgrass	Panicum capillare	A	2.0 - 3.0
Wooly Cupgrass†	Eriochloa villosa	A	3.0 - 4.0

common Name	Scientific Name	Life Cycle	Application Rate (Pints / Acre) 2.0 - 3.0
Illigatorweed	Alternanthera philoxeroides	A/P	2.0 - 3.0
rrowhead	Pluchea sericea	A	4.0 - 6.0
room snakeweed <sup>2</sup>	Gutierrezia sarothrae	P	3.0 - 4.0
ull thistle	Cirsium vulgare	В	3.0 - 4.0
urclover†	Medicago spp.	A	3.0 - 4.0
urdock	Arctium spp.	В	2.0 - 3.0
amphorweed	Heterotheca subaxillaris	Р	2.0 - 3.0
anada thistle	Cirsium arvense	Р	4.0 - 6.0 2.0 - 3.0 2.0 - 3.0
arolina geranium	Geranium carolinianum	A	2.0 - 3.0
arpetweed	Mollugo verticillata	A	2.0 - 3.0
hickweed, Mouseear <sup>1</sup>	Cerastium vulgatum	A	3.0 - 4.0 2.0 - 3.0
lover	Trifolium spp.	A/P	3.0 - 4.0
lover, Hop†	Trifolium procumbens	A	3.0 - 4.0
ocklebur	Xanthium strumarium	A	2.0 - 3.0
ommon chickweed ommon ragweed	Stellaria media Ambrosia artemisiifolia	A	2.0 - 3.0
		A	3.0 - 4.0
udweed† andelion	Gnaphalium spp.	P	3.0 - 4.0
	Taraxacum officinale	P	2.0 - 3.0 3.0 - 4.0
esert Camelthorn	Alhagi pseudalhagi		3.0 - 4.0
iffuse knapweed	Centaurea diffusa	A	
ock	Rumex spp.	P	3.0 - 4.0
ogfennel	Eupatorium capillifolium	A	2.0 - 3.0 3.0 - 4.0
ddleneck†	Amsinckia intermedia	A	3.0 - 4.0
laree	Erodium spp.	A	2.0 - 3.0
eabane	Erigeron spp.	A	2.0 - 3.0
iant ragweed	Ambrosia trifida	A P	4.0 - 6.0 3.0 - 4.0
oldenrod	Solidago spp.	P	3.0 - 4.0
rey rabbitbrush	Chrysothamnus nauseosus		4.0 - 6.0
enbit <sup>†</sup>	Lamium aplexicaule	A	3.0 - 4.0
oary vervain	Verbena stricta	A	2.0 - 3.0 2.0 - 3.0
orseweed .	Conyza canadensis		2.0 - 3.0
ndian mustard	Brassica juncea	A	2.0 - 3.0
apanese bamboo /	D-1		40.00
knotweed	Polygonum cuspidatum	P	4.0 - 6.0
notweed, prostrate†	Polygonum aviculare	A/P	3.0 - 4.0
ochia <sup>1</sup>	Kochia scoparia	A	2.0 - 3.0
ambsquarters	Chenopodium album	A	2.0 - 3.0
espedeza	Lespedeza spp.	Р	2.0 - 3.0
ittle mallow	Malva parviflora	В	4.0 - 6.0 4.0 - 6.0
lilkweed	Asclepias spp.	P	4.0 - 6.0
liners lettuce	Montia perfoliata	A	2.0 - 3.0
lullein	Verbascum spp.	В	2.0 - 3.0
ettleleaf goosefoot	Chenopodium murale	A	2.0 - 3.0
xeye daisy	Chrysanthemum		00.00
	leucanthemum	P	2.0 - 3.0
epperweed	Lepidium spp.	A	2.0 - 3.0
igweed	Amaranthus spp.	A	2.0 - 3.0
lantain	Plantago spp.	P	2.0 - 3.0
okeweed	Phytolacca Americana	Р	3.0 - 4.0
rimrose	Oenothera kunthiana	P	4.0 - 6.0
uncturevine	Tribulus terrestris	A	2.0 - 3.0 3.0 - 4.0
urple loosestrife <sup>2</sup>	Lythrum salicaria	P	3.0 - 4.0
urslane	Portulaca spp.	A	3.0 - 4.0
usley, Florida <sup>†</sup>	Richardia scabra	A	3.0 - 4.0
ocket, London†	Sisymbrium irio	A	3.0 - 4.0
ush skeletonweed <sup>2</sup>	Chondrilla juncea	В	3.0 - 4.0
ussian knapweed	Centaurea repens	P	4.0 - 6.0
ussian thistle	Salsola kali	A	2.0 - 3.0
altbush	Atriplex spp.	A	3.0 - 4.0
hepherd's-purse†	Capsella bursa-pastoris	A	3.0 - 4.0
ilverleaf nightshade	Solanum elaeagnifolium	P	4.0 - 6.0
martweed	Polygonum spp.	A/P	2.0 - 3.0
orrell	Rumex spp.	Р	2.0 - 3.0
owthistle	Sonchus spp.	A	4.0 - 6.0
purge, Annual†	Euphorbia spp.	A	3.0 - 4.0
tinging nettle <sup>2</sup>	Urtica dioica	P	3.0 - 4.0
unflower	Helianthus spp.	A/B	2.0 - 3.0
weet clover	Melilotus spp.	A/B	2.0 - 3.0
ansymustard	Descurainia pinnate	A	2.0 - 3.0
exas thistle	Cirsium texanum	P	4.0 - 6.0
elvetleaf†	Abutilon theophrasti	A	3.0 - 4.0
lestern ragweed	Ambrosia psilostachya	P	2.0 - 3.0
/ild carrot	Daucus carota	В	2.0 - 3.0
/ild lettuce	Lactuca spp.	A/B	2.0 - 3.0
/ild parsnip	Pastinaca sativa	B	20-30
Vild turnip	Brassica campestris	В	2.0 - 3.0 2.0 - 3.0
riiu (uitiip	Diassica carripestris	P	2.0 - 3.0

Broadleaf Weeds cont'd.

Common Name	Scientific Name	Life Cycle	Application Rate (Pints / Acre)
Yellow starthistle	Centaurea solsitialis	A	3.0 - 4.0
Yellow woodsorrel	Oxalis stricta	P	2.0 - 3.0

VINES AND BRAMBLES

Common Name	Scientific Name	Life Cycle	Application Rate (Pints / Acre)
Blackberry <sup>7</sup>	Rubus spp.	P	4.0 - 6.0
Dewberry <sup>7</sup>	Rubus spp.	P	4.0 - 6.0
Field bindweed	Convolvulus arvensis	P	1.0
Greenbriar	Smilax spp.	P	3.0 - 4.0
Hedge bindweed	Calystegia sequium	A	1.0
Honeysuckle	Lonicera spp.	. P	3.0 - 4.0
Kudzu‡	Pueraria lobata	P	4.0 - 6.0
Morningglory	Ipomoea spp.	A/P	3.0 - 4.0
Poison ivy	Rhus radicans	P	3.0 - 4.0
Redvine	Brunnichia cirrhosa	P	3.0 - 4.0
Trumpetcreeper	Campsis radicans	P	4.0 - 6.0
Virginia creeper	Parthenocissus quinquefolia	P	4.0 - 6.0
Wild buckwheat	Polygonum convolvulus	P	2.0 - 3.0
Wild grape	Vitis spp.	P	4.0 - 6.0
Wild rose	Rosa spp.	P	3.0 - 4.0

Common Name	Scientific Name	Life Cycle	Application Rate (Pints / Acre)
Black Locust <sup>3</sup>	Robinia pseudoacacia	P	4.0 - 6.0
Blackgum	Nyssa sylvatica	P	4.0 - 6.0
Boxelder	Acer negundo	P	4.0 - 6.0
Brazilian peppertree	Schinus terebinthifolius	P	4.0 - 6.0
Cherry	Prunus spp.	P	4.0 - 6.0
Chinaberry	Melia azadarach	P	4.0 - 6.0
Chinese tallow-tree	Sapium sebiferum	P	4.0 - 6.0
Dogwood	Cornus spp.	P	4.0 - 6.0
Elm <sup>4</sup>	Ulmus spp.	P	4.0 - 6.0
Hawthorn	Crataegus spp.	P	4.0 - 6.0
Hickory	Carya spp.	P	4.0 - 6.0
Honeylocust <sup>5</sup>	Gleditsia triacanthos	P	4.0 - 6.0
Maple	Acer spp.	P	4.0 - 6.0
Melaleuca	Melaleuca guiguenervia	P	4.0 - 6.0
Mulberry	Morus spp.	P	4.0 - 6.0
Oak	Quercus spp.	P	4.0 - 6.0
Persimmon	Diospyros virginiana	P	4.0 - 6.0
Pine <sup>6</sup>	Pinus spp.	P	4.0 - 6.0
Poplar	Populus spp.	P	4.0 - 6.0
Privet .	Ligustrum vulgare	P	4.0 - 6.0
Red Alder	Alnus rubra	P	4.0 - 6.0
Red Maple	Acer rubrum	Р	4.0 - 6.0
Rubber rabbitbrush	Chrysothamnus nauseaosus	P	4.0 - 6.0
Russian Olive	Eleagnus angustifolia	P	4.0 - 6.0
Saltcedar	Tamarix ramosissima	P	4.0 - 6.0
Sassafras	Sassafras albidum	P	4.0 - 6.0
Sourwood	Oxydendrum arboreum	P	4.0 - 6.0
Sumac	Rhus spp.	P	4.0 - 6.0
Sweetgum	Liquidambar styraciflua	P	4.0 - 6.0
Water willow	Justica americana	P	4.0 - 6.0
Willow	Salix spp.	P	4.0 - 6.0
Yellow poplar	Liriodendron tulipifera	P	4.0 - 6.0

- † For preemergence control, tank-mix with Pendulum® ‡ Use a minimum of 75 GPA Control of established stands may require repeat applications.
- <sup>1</sup> For preemergence control, tank mix with Pendulum® or Karmex®.
- <sup>2</sup> For best results, early postmergence applications are required.

  <sup>3</sup> Tank-mix with Roundup®, Accord®, Escort®, Krenite®, Garlon™ 3A, or Tordon™ K.

  <sup>4</sup> Tank-mix with Roundup®, Accord® or Escort®.

  <sup>5</sup> Tank-mix with Roundup®, Accord®, Garlon™ 3A, or Tordon™ K.

  <sup>6</sup> Tank-mix with Roundup®, Accord®, Krenite®, Garlon™ 3A, or Tordon™ K.

- <sup>7</sup> The degree of control is species dependent; some Rubus species may not be completely controlled.

#### NON-CROP SITES PRODUCT INFORMATION

NOTE: DO NOT make applications of this product by fixed wing aircraft except for aerial applications for brush control. Refer to the BRUSH CONTROL section of this label for

Apply at the rate of 4.0 to 6.0 pints product per acre for brush control. Refer to the WEEDS CONTROLLED section of this label for a list of species controlled by LPI Imazapyr Pro VM & Aquatic Herbicide. In addition to the species listed in the WEEDS CONTROLLED section, this product will also control the following woody brush and trees:

Common Name	Scientific Name
Alder <i>Alnus</i> spp. Aspen <i>Populus</i> spp.	
Australian pine <sup>3</sup>	Casuarina equisetifolia
Autumn olive	Elaeagnus umbellate
Birch <sup>1</sup> Betula spp.	
Black oak	Quercus kelloggii
Ceanothis	Ceanothis spp.
Chinquapin <sup>2</sup>	Castanopsis chrysophyl
Cottonwood	Populus spp.
Cypress	Taxodium spp

Sambucus spp.

Eucalyptus spp.

Eucalyptus Hazel<sup>3</sup> Corylus cornuta

Elderberry<sup>3</sup>

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Common Name

Scientific Name

Holly<sup>1,2</sup> Including:

Gallberry (Ilex glabra)2,3 Tall gallberry (Ilex coriacea)2 Yaupon (Ilex vomitoria)2 Gaylussacia spp.

Huckleberry

Lyonia spp. Including:

Fetterbush (Lyonia lucida) Staggerbush (Lyonia mariana)

Arbutus menziesii Madrone Manzanita, greenleaf2 Arctostaphylos patula Poison oak Rhus diversiloba Sapium sebiferum Popcorn-tree Scotch broom<sup>3</sup> Cytisus scoparius Sweetbay magnolia2,3 Magnolia virginiana Sycamore Tanoak<sup>1,2,3</sup> Platanus occidentalis Lithocarpus densiflorus

TiTi1,2 Cyrilla racemiflora Tree of heaven?

Vaccinium spp. Including:

Blueberry (Vaccinium spp.)

Sparkleberry (Vaccinium arboretum)

Waxmyrtle<sup>2,3</sup>

Myrica californica Myrica cerifera

Ailanthus altissima

- 1 Use the higher label rates for this species.
- An oil emulsion carrier is advised for this species.
   Tank mix with Garlon™ 4 as a basal or stump treatment.

#### APPLICATION NOTES FOR WET SITES

Except in the states of California and New York, LPI Imazapyr Pro VM & Aquatic Herbicide can be applied to the following use sites:

With temporary surface water present:

- · Areas between planting beds that have collected water
- Equipment ruts
- . Depressions created by forest management activities

With no temporary surface water present:

- Drainage ditches
   Intermittent drainage
- · Intermittently flooded low lying areas
- . Seasonally dry flood plains
- · Transitional areas between upland and lowland sites
- · Marshes, swamps and bogs
- Seasonally dry flood deltas

NOTE: Only the edges of drainage ditches may be treated when water is present.

#### STUMP AND CUT STEM TREATMENTS

Undesirable woody vegetation may be controlled by applying LPI Imazapyr Pro VM & Aquatic Herbicide to the cambium of freshly cut stump surfaces using either a dilute solution or concentrate, or to cuts on the stems of target woody vegetation using a dilute solution. Concentrated solutions require fewer cuts on the stem while still remaining effective. For best results, stump and cut stem treatments should be done in summer and early fall and are least effective in the spring.

NOTE: Desirable woody plants may be injured or killed if they are grafted to the root system of the treated tree or they extend from the same root system as the treated tree.

#### **APPLICATION WITH DILUTE SOLUTIONS**

Preparation: Add 8-12 fluid ounces of LPI Imazapyr Pro VM & Aquatic Herbicide to one gal-Ion of water, mixing thoroughly.

Adjuvants: To prevent freezing when applying in cold conditions, ethelene glycol antifreeze may be added according to the manufacturer's instructions

A surfactant or penetrating agent may be used to improve uptake of the herbicide through cambiums that have become partially callused.

Application: Cut Stump Treatments - Cut the stump surface and then brush or spray the solution onto the exposed cambium in the cuts, making sure to thoroughly wet the entire

Tree Injection Treatments - Making sure the injector completely penetrates the bark at each injection site, apply 1 milliliter of solution at each site. Use a one inch or smaller interval between injection sites completely around the trunk of the tree.

Frill or Girdle Treatments: Make cuts through the bark at no more than two inch intervals around the tree using a hatchet, machete, or similar device. Spray or brush the solution into each cut until thoroughly wet.

#### **APPLICATION WITH CONCENTRATED SOLUTIONS**

Preparation: Use 2 quarts of LPI Imazapyr Pro VM & Aquatic Herbicide with no more than 1 quart of water by volume for concentrated solution applications.

Adjuvants: To prevent freezing when applying in cold conditions, ethelene glycol antifreeze may be added according to the manufacturer's instructions.

A surfactant or penetrating agent may be used to improve uptake of the herbicide through cambiums that have become partially callused.

Application: Tree Injection Trea .....its - Making sure the injector completely penetrates the bark at each injection site, apply 1 millileter of solution at each site. For best results, make one injection for every three inches of tree diameter at breast height (DBH) spacing the injections equally around the trunk.

Frill or Girdle Treatments: Make cuts through the bark at no more than two inch intervals around the tree using a hatchet, machete, or similar device. Spray or brush the solution into each cut until thoroughly wet.

Hack and Squirt Treatments: At equal intervals around the tree, make a downward-angled cut completely through the bark and cambium for every three inches of DBH using a hatchet or similar device. Then apply 1 milliliter of solution to each cut using a squirt bottle, syringe, or similar device, making sure that the solution does not run out of the cut.

#### THINLINE BASAL AND STEM APPLICATIONS AND LOW VOLUME BASAL BARK **TREATMENTS**

Applications of LPI Imazapyr Pro VM & Aquatic Herbicide will control susceptible species such as big leaf maple (Acer macrophyllum), willow (Salix spp.) and Eucalyptus (Eucalyptus spp.) with stem diameters of 4 inches or less. Application sites containing high stem densities and multiple, small (1/2 inch diameter or less) stems should be foliar treated with low volume backpack or fixed boom applications. See BRUSH CONTROL/GROUND APPLICA-TIONS/Low Volume section of this label

#### THINLINE BASAL AND STEM APPLICATIONS

Use thinline basal and stem applications for susceptible woody species with a stem ground line diameter of 3 inches or less. For larger diameter stems, use the low volume basal bark treatment below.

Preparation: Mix 1.5 - 3.0 pints of LPI Imazapyr Pro VM & Aquatic Herbicide in one gallon of diesel oil or penetrating oil, stirring frequently to maintain a uniform mixture.

Application: 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.

Precautions: Do not over apply to the point of runoff resulting in puddling.

Injury may occur to desirable conifers or other plant species if applications are made directly to those plants.

#### LOW VOLUME BASAL BARK TREATMENTS

Use low volume basal bark treatments on stems up to 4 inches in diameter at breast height (DBH). LPI Imazapyr Pro VM & Aquatic Herbicide may be tank mixed with Garlon™ 4 or other basal products to broaden the spectrum of control. To prevent stump resprouting with small (1/2 inch diameter) stems, avoid application on sites that have been mowed prior to application.

Preparation: Mix 8-12 oz. of LPI Imazapyr Pro VM & Aquatic Herbicide in one gallon of diesel oil or penetrating oil, stirring frequently to maintain a uniform mixture.

Tank Mixes: To control black locust, honey locust, hackberry, elms and other species listed on manufacturer's labels, use 1.5 - 2.5% LPI Imazapyr Pro VM & Aquatic Herbicide mixed with 15 to 20% Garlon™ 4. A tank mix of 1.5% LPI Imazapyr Pro VM & Aquatic Herbicide and Garlon™ 4 is effective in the Northeastern U.S. Use the higher rate (2.5%) of LPI Imazapyr Pro VM & Aquatic Herbicide in areas containing sassafras, oak, hickory, cherry, and maples or in the southern portion of the U.S. This product may be tank-mixed with products listed provided the tank-mixed product is registered for use on this (these sites). Follow the more restrictive use directions, precautions, and limitations on the labels of the products in

Application: Spray the lower 12 - 18 inches of the stem with the mixture (including the root-collar area) until wet.

Precautions: DO NOT over apply to the point of dripping or puddling.

Injury may occur to desirable conifers or other plant species if applications are made directly to those plants.

#### **BRUSH CONTROL**

When mixed with water and a surfactant, LPI Imazapyr Pro VM & Aquatic Herbicide may be applied as a spray solution for brush control in the following sites:

- . Utility plant sites
- · Pumping stations
- · Storage areas
- · Petroleum tank farms
- · Railroad, utility, pipeline and highway rights-of-way
- · Fence rows
- . Non-irrigation ditchbanks

LPI Imazapyr Pro VM & Aquatic Herbicide may be applied to non-grazed or hayed areas within these sites, and may also be used to control brush in wildlife openings.

#### **AERIAL APPLICATIONS:**

NOTE: Aerial applications for brush control may be made by fixed wing aircraft. Be sure to read and follow the precautions below when using fixed wing aircraft,

Preparation: Add the amount of LPI Imazapyr Pro VM & Aquatic Herbicide specified in this label for the intended use to 5 - 30 gallons of water per acre, mixing thoroughly.

Adjuvants: To increase efficacy, a compatible nonionic surfactant or methylated seed oil should be added to the spray solution. See the Adjuvant section above for specific

Except when applying with a Microfoil™ boom, Thru-Valve™ Boom or other similar equipment, a drift control agent may be added.

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If necessary, a foam reducing agent may also be added.

Application: Applications should not be made under windy or gusty conditions and all possible precautions should be taken in order to minimize or eliminate spray drift, refer to the Spray Drift section at the beginning of this label for more information. A calibrated controlled droplet boom and nozzle configuration is recommended to assist in mitigating spray drift.

Be sure to maintain adequate buffer zones.

Precautions: DO NOT make applications by fixed wing aircraft 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.

Because uncoated steel (except stainless steel) surfaces that experience prolonged exposure to this product may corrode and eventually fail, thoroughly clean application and mixing equipment as well as portions of the aircraft that may have been exposed to the spray (including landing gear) immediately after use by flushing with water.

Side trimming is not advised with LPI Imazapyr Pro VM & Aquatic Herbicide unless death of treated tree can be tolerated.

Treated areas may not be cut for hay less than 7 days after treatment.

#### GROUND APPLICATIONS:

See the instructions under Ground Operated Spray Equipment in the Mixing and Application Instructions section at the beginning of this label.

#### **Specific Instructions for Ground Applications:**

Preparation: Use 1.0 - 3.0 pints of LPI Imazapyr Pro VM & Aquatic Herbicide in tank mixtures when the roots of desirable trees may extend into rights-of-way corridors. Desirable trees may be damaged or die when their roots extend into treated zones and more than 3 pints per acre is applied.

Tank Mixes: To control black locust, honey locust, hackberry, elms and other species listed on manufacturer's labels, use a tank mix of 1.5 - 2.5% LPI Imazapyr Pro VM & Aquatic Herbicide with 15 - 20% Garlon™ 4 in basal oil. Use the higher rate of LPI Imazapyr Pro VM & Aquatic Herbicide in areas containing sassafras, oak, hickory, cherry, and maples or in the southern ²/a's of the U.S. The lower rates listed will be effective in the Northeastern U.S. This product may be tank-mixed with products listed provided the tank-mixed product is registered for use on this (these sites). Follow the more restrictive use directions, precautions, and limitations on the labels of the products in the tank mix.

SPRAY SOLUTION MIXING GUIDE FOR LOW VOLUME FOLIAR APPLICATIONS

SPRAY	DESIRE	D CONCENTRATION	(fluid volume)	
SOLUTION	LPI Imaza	yr Pro VM	Garlon <sup>1</sup>	™ 4
VOLUME	& Aquatic	Herbicide		
	1.5%	2.5%	15%	20%
1 gallon	1.9 oz.	3.2 oz.	19.2 oz.	25.6 oz.
3 gallons	5.7 oz.	9.6 oz.	57.6 oz.	76.8 oz.
4 gallons	7.7 oz.	12.8 oz.	76.8 oz.	102.4 oz.
5 gallons	9.6 oz.	16.0 oz.	96.0 oz.	1.0 gallon
50 gallons	0.75 gallons	1.25 gallons	7.5 gallons	10.0 gallons
100 gallons	1.5 gallons	2.5 gallons	15.0 gallons	20.0 gallons

Precautions: DO NOT side trim with LPI Imazapyr Pro VM & Aquatic Herbicide unless severe injury or death of the treated tree can be tolerated. LPI Imazapyr Pro VM & Aquatic Herbicide is readily translocated and can result in death of the entire tree.

Specific Instructions for Low Volume Applications:

See the instructions under Directed Foliar or Spot Spray Equipment in the Mixing and Application Instructions section at the beginning of this label.

**Preparation:** To prepare the spray solution, thoroughly mix in water 0.5% to 5.0% LPI Imazapyr Pro VM & Aquatic Herbicide plus surfactant (See the ADJUVANT section above for specific instructions).

For difficult to control brush species, use the higher concentrations of herbicide and/or spray volumes. Consult the WEEDS CONTROLLED section above for specific instructions.

For improved control, LPI Imazapyr Pro VM & Aquatic Herbicide may be tank mixed with other products, consult the Suggested Tank-Mixes and Application Rates table below.

Adjuvants: If necessary, a foam reducing agent may also be added.

Application: Use equipment calibrated to deliver 5 to 20 gallons of spray solution per acre.

When applying to brush up to 4 feet tall, spray down on the crown covering the crown and penetrating approximately 70% of the plant.

When applying to brush 4 - 8 feet tall, apply to at least two sides of the plant by spraying the plant in smooth vertical motions from the crown to the bottom. For best results, be sure to cover the crown of the plant.

When applying to brush over 8 feet tall, spray at least two sides of the brush using a smooth zigzag pattern from crown to bottom.

When making a broadcast application, spray the crown in a manner that simulates a gentle rain, allowing the spray to penetrate the target foliage but without falling to the understory. Severe injury or death of plants in the understory may result from contact with the spray solution.

Precautions: DO NOT side trim well LPI Imazapyr Pro VM & Aquatic Herbicide unless severe injury or death of the treated tree can be tolerated. LPI Imazapyr Pro VM & Aquatic Herbicide is readily translocated and can result in death of the entire tree

DO NOT apply more than 6 pints of LPI Imazapyr Pro VM & Aquatic Herbicide per acre. Excessive wetting of foliage is not advised.

**LOW-VOLUME TANK-MIXES AND APPLICATION RATES** 

Target Vegetation	Rate of LPI Imazapyr Pro VM & Aquatic Herbicide	Tank Mix
Mixed hardwoods without elm, locust, or pine	1.0-1.5% by volume	Surfactant
Mixed hardwoods containing elm, locust, and pine	0.5-1.0% by volume	Accord® at 2-3% by volume plus surfactant
Mixed hardwoods with locust and pine but no elm	0.5-1.0% by volume	Krenite® at 2-5% by volume plus surfactant
Mixed hardwoods with locust and elm but no pine	0.5-1.0% by volume	Escort® at 2 oz./Acre or 2.3 grams/gal. plus surfactant

NOTE: LPI Imazapyr Pro VM & Aquatic Herbicide has been found to be LESS effective in tank mixes with 2,4-D or products containing 2,4-D.

Specific Instructions for High Volume Applications:

See the instructions under Ground Operated Spray Equipment in the Mixing and Application Instructions section at the beginning of this label.

Preparation: Mix 2 - 6 pints of LPI Imazapyr Pro VM & Aquatic Herbicide per acre in water and add a surfactant (see ADJUVANT section of this label for specific instructions and rates of surfactants).

For difficult to control brush species, use the higher concentrations of herbicide and/or spray volumes. Consult the WEEDS CONTROLLED section above for specific instructions.

Adjuvants: If necessary, a foam reducing agent may also be added.

Tank Mixes: To provide control of species tolerant to LPI Imazapyr Pro VM & Aquatic Herbicide, tank mixes with Accord®, Roundup®, Krenite®, Escort®, Telar®, Tordon™ K, Garlon™ 3A, Banvel® and Vanquish® may be used. This product may be tank-mixed with products listed provided the tank-mixed product is registered for use on this (these sites). Follow the more restrictive use directions, precautions, and limitations on the labels of the products in the tank mix.

NOTE: LPI Imazapyr Pro VM & Aquatic Herbicide has been found to be LESS effective in tank mixes with 2,4-D or products containing 2,4-D.

Application: For best results on medium to high density brush, use equipment calibrated to deliver up to 100 gallons of spray solution per acre (GPA).

Spray the foliage of the vegetation to be controlled in a uniform manner being sure NOT to apply to the point of run-off.

Precautions: DO NOT side trim with LPI Imazapyr Pro VM & Aquatic Herbicide unless severe injury or death of the treated tree can be tolerated. LPI Imazapyr Pro VM & Aquatic Herbicide is readily translocated and can result in death of the entire tree.

DO NOT apply more than 6 pints of LPI Imazapyr Pro VM & Aquatic Herbicide per acre.

Excessive wetting of foliage is not advised.

#### INVERT EMULSIONS:

In order to minimize spray drift and run-off, LPI Imazapyr Pro VM & Aquatic Herbicide may be applied as an invert emulsion carrier when making applications to brush. The spray emulsion may be batch-mixed in a single tank or injected (in-line mixing). For mixing directions, refer to the invert chemical label.

#### CONTROL OF WEEDS UNDER PAVED SURFACES

In industrial sites or where pavement has a barrier along the perimeter that prevents roots of desirable plants from encroaching into application areas, LPI Imazapyr Pro VM & Aquatic Herbicide may be used under asphalt, pond liners and other paved areas to control weeds.

Do not use this product under paved areas such as driveways or parking lots on residential properties, nor in recreational areas such as under bike or jogging paths, golf cart paths, tennis courts, or anywhere landscape plantings might occur in the future. Desirable plants may be injured or killed if this product is applied where their roots are present, and the roots of trees and shrubs may extend beyond the drip line of the plant (the outer edges of the branch extremities).

Preparation: Mix in a tank using a rate of 6 pints (2.2 fl. oz. per 1,000 ft.²) of LPI Imazapyr Pro VM & Aquatic Herbicide to at least 100 gallons of water per acre. Create sufficient spray solution to ensure complete and uniform coverage of the entire area to be paved, including shoulder areas.

Application: Use equipment calibrated to deliver at least 100 gallons of spray solution per acre (GPA).

LPI Imazapyr Pro VM & Aquatic Herbicide may need to be incorporated into the soil if the soil is not moist prior to application in order to activate the herbicide. Incorporation may be accomplished by using a rototiller or disc to a depth of 4 - 6 inches, or 1 inch of irrigation may be used. If irrigating, do not allow treated soil to wash or move into untreated areas.

# LPI IMAZAPYR PRO VM & ÀQUATIC HERBICIDE EPA REG. NO. 34704-973

Precautions: LPI Imazapyr Pro VM & Aquatic Herbicide application sites should be paved over as soon as possible after application.

DO NOT apply where the chemical may contact the roots of desirable trees or other plants.

DO NOT apply more than 6 pints of LPI Imazapyr Pro VM & Aquatic Herbicide per acre.

All tubers, rhizomes, stolons and other vegetative plant parts that are present in the site should be scalped to a depth that assures their removal using a grader blade or similar technique.

Applications should be made to the soil surface only when final grade is established. Do not move soil following LPI Imazapyr Pro VM & Aquatic Herbicide application.

# CONTROL OF UNDESIRABLE WEEDS IN UNIMPROVED BURMUDAGRASS AND BAHIA-GRASS

LPI Imazapyr Pro VM & Aquatic Herbicide may be used in non-cropland industrial sites, roadsides and utility rights-of-way to release unimproved bahiagrass and bermudagrass from competition with broadleaf weeds and grasses listed in the WEEDS CONTROLLED section above. LPI Imazapyr Pro VM & Aquatic Herbicide applications to bermudagrass will cause seedhead inhibition and a compacted growth habit.

#### WEEDS CONTROLLED

Common Name
Bedstraw
Bishopweed
Buttercup
Carolina geranium
Fescue
Foxtail
Little barley
Seedling Johnsongrass
Wild carrot

White clover

Yellow woodsorrel

ROLLED

Scientific Name
Galium spp.
Ptilimnium capillaceum
Ranunculus parviflorus
Geranium carolinianum
Festuca spp.
Setaria spp.
Hordeum pusillum
Sorghum halepense
Daucus carota
Trifolium repens
Oxalis stricta

Preparation: Bermudagrass - Mix 6-12 oz. of LPI Imazapyr Pro VM & Aquatic Herbicide per acre when grass is dormant, or 3-4 oz. per acre once the grass has reached full green-up. A surfactant should be used in the spray solution, but should NOT be used at a rate higher than 1 oz. / 25 pailons of spray solution.

Bahiagrass - Mix 4-8 oz. of LPI Imazapyr Pro VM & Aquatic Herbicide per acre when grass is dormant or after the grass has initiated green-up but has not exceeded 25% green-up. A surfactant should be used in the spray solution (refer to the ADJUVANT section of this label for specific instructions on surfactants).

Tank Mixes: Pendulum® herbicide may be added at the rate of 3.3-6.6 lbs. per acre for additional pre-emergence control of annual grasses and small seeded broadleaf weeds. Refer to the Pendulum® herbicide label for weeds controlled and other use directions and precautions.

To control johnsongrass in bermudagrass turf, use 8 oz. of LPI Imazapyr Pro VM & Aquatic Herbicide with 12 oz. of Roundup® per acre and a surfactant.

For additional control of broadleaves and vines, 1-2 pints of Garlon™ 3A per acre may be added to the LPI Imazapyr Pro VM & Aquatic Herbicide / Roundup® mix described above.

This product may be tank-mixed with products listed provided the tank-mixed product is registered for use on this (these sites). Follow the more restrictive use directions, precautions, and limitations on the labels of the products in the tank mix.

NOTE: LPI Imazapyr Pro VM & Aquatic Herbicide has been found to be LESS effective in tank mixes with 2,4-D or products containing 2,4-D.

Application: Uniformly apply with properly calibrated ground equipment using at least 10 gallons of water per acre with a spray pressure of 20 to 50 psi.

Precautions: 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.

Applications made during green-up will delay green-up.

Temporary yellowing of grass may occur when treatment is made after regrowth commences.

## **GRASS GROWTH AND SEEDHEAD SUPPRESSION**

In unimproved areas, LPI Imazapyr Pro VM & Aquatic Herbicide may be used to suppress seedhead development and growth of certain types of turfgrass.

Preparation: Bermudagrass - Mix 6-8 oz. of LPI Imazapyr Pro VM & Aquatic Herbicide with at least 10 gallons of water per acre. Do NOT add a surfactant to this mix.

Cool-Season Unimproved Turf - Mix 2 oz. of LPI Imazapyr Pro VM & Aquatic Herbicide per acre with 0.25% non-ionic surfactant (refer to the ADJUVANT section of this label for specific instructions on surfactants).

Tank Mixes: For increased suppression of cool-season unimproved turf, LPI Imazapyr Pro VM & Aquatic Herbicide may be tank-mixed with products such as Campaign® at a rate of 24 oz. or Embark® at a rate of 8 oz. per acre. This product may be tank-mixed with products listed provided the tank-mixed product is registered for use on this (these sites). Follow the more restrictive use directions, precautions, and limitations on the labels of the products in the tank mix.

Application: Apply uniformly with properly calibrated ground equipment using a spray pressure of 20 to 50 psi.

Apply to Bermudagrass from earry green-up until just before seed head initiation.

For optimum performance, application should be made prior to culm elongation

For applications made prior to mowing, allow at least three days of active growth before moving

For applications made after mowing, allow sufficient time for the grasses to recover before applying this product or injury may be increased.

Precautions: 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. LPI Imazapyr Pro VM & Aquatic Herbicide may result in temporary turf damage and/or discoloration when applied to desirable turf, with effects dependent upon environmental conditions.

Tank mixes may increase injury to desired turf. Consult each product label for turf species and other use directions and precautions.

Applications made during green-up will delay green-up.

Temporary yellowing of grass may occur when treatment is made after regrowth commences.

#### TOTAL VEGETATION CONTROL WHERE BAREGROUND IS DESIRED

Where bareground is desired, LPI Imazapyr Pro VM & Aquatic Herbicide provides effective preemergence or postemergence control of many annual and perennial broadleaf and grass weeds, and is particularly effective on hard-to-control perennial grasses.

Preparation: Mix 1.5-6 pints LPI Imazapyr Pro VM & Aquatic Herbicide per acre with water as per the instructions in the MIXING AND APPLICATION INSTRUCTIONS at the beginning of this label.

For best results on resistant or difficult to control annual grasses, applications with a total volume of 100 gallons per acre or less should be used.

For difficult to control brush species, use the higher concentrations of herbicide and/or spray volumes. Consult the WEEDS CONTROLLED section above for specific instructions.

Adjuvants: Always use a spray adjuvant when making a postemergence application. Refer to the ADJUVANT section of this label for specific instructions.

Tank Mixes: To provide control of species tolerant to LPI Imazapyr Pro VM & Aquatic Herbicide, tank mixes with Roundup®, Finale®, MSMA, Diuron, Karmex®, Pendulum®, Simazine, Banvel®, Vanquish®, or Oust® herbicides may be used. The degree and duration of control are dependent on the rate of LPI Imazapyr Pro VM & Aquatic Herbicide used, the tank mix partner(s), the volume of carrier used, and environmental factors such as rainfall, soil properties, etc.

Tank-Mix Instructions for Bareground Sites

LPI Imazapyr Pro VM & Aquatic Pendulum® WDG Pendulum® 3.3 EC Diuron
Herbicide (pints / acre) (lbs. / acre) (quarts / acre) (lbs. a.i. / a

| Herbicide (pints / acre) | (lbs. / acre) | (quarts / acre) | (lbs. a.i. / acre) | 1.5-3.0 | 6.6 | 4.8 | 4-6 | 2.0-4.0 | 6.6 | 4.8 | 6-10 | 3.0-6.0 | 6.6 | 4.8 | 8-12 |

Use higher rates for fall applications, in areas that have not been previously treated, or that have heavy infestations.

For quicker burndown or brown-out of targeted weeds, LPI Imazapyr Pro VM & Aquatic Herbicide may be tank mixed with products such as Roundup®, Finale®, or MSMA.

This product may be tank-mixed with products listed provided the tank-mixed product is registered for use on this (these sites). Follow the more restrictive use directions, precautions, and limitations on the labels of the products in the tank mix.

**NOTE:** LPI Imazapyr Pro VM & Aquatic Herbicide has been found to be LESS effective in tank mixes with 2.4-D or products containing 2.4-D.

**Application:** Refer to the MIXING AND APPLICATION INSTRUCTIONS in the GENERAL INFORMATION section at the beginning of this label for directions pertaining to your desired method of application.

Applications of LPI Imazapyr Pro VM & Aquatic Herbicide may be made anytime of the year.

 $\begin{tabular}{ll} \textbf{Precautions:} DO \ NOT \ apply \ more \ than 6 \ pints \ of \ LPI \ Imazapyr \ Pro \ VM \ \& \ Aquatic \ Herbicide \ per \ acre. \end{tabular}$ 

Spot Treatments: LPI Imazapyr Pro VM & Aquatic Herbicide may be used as a follow-up treatment to control escapes or weed encroachment in a bareground situation.

**Preparation:** Mix 0.5-5.0% LPI Imazapyr Pro VM & Aquatic Herbicide per gallon of water as per the instructions in the MIXING AND APPLICATION INSTRUCTIONS at the beginning of this label.

For difficult to control brush species, use the higher concentrations of herbicide and/or spray volumes. Consult the WEEDS CONTROLLED section for specific instructions.

**Adjuvants:** Always use a spray adjuvant when making a postemergence application. Refer to the ADJUVANT section of this label for specific instructions.

Tank Mixes: To improve residual weed control and expand the number of weeds controlled, tank mixes with Pendulum® or Diuron herbicides may be used.

For quicker burndown or brown-out of targeted weeds, LPI Imazapyr Pro VM & Aquatic Herbicide may be tank mixed with products such as Roundup®, Finale®, or MSMA.

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This product may be tank-mixed with products listed provided the tank-mixed product is registered for use on this (these sites). Follow the more restrictive use directions, precautions, and limitations on the labels of the products in the tank mix.

NOTE: LPI Imazapyr Pro VM & Aquatic Herbicide has been found to be LESS effective in tank mixes with 2.4-D or products containing 2.4-D.

**Application:** Refer to the MIXING AND APPLICATION INSTRUCTIONS in the PRODUCT INFORMATION section at the beginning of this label for directions pertaining to your desired method of application.

Applications of LPI Imazapyr Pro VM & Aquatic Herbicide may be made anytime of the year.

Precautions: DO NOT apply more than 6 pints of LPI Imazapyr Pro VM & Aquatic Herbicide per acre.

#### **AQUATIC APPLICATIONS**

Aquatic applications may be made in and around standing and flowing water for control of floating and emergent aquatic vegetation or terrestrial vegetation growing in or around surface water. They types of water bodies that may be treated are:

- Marine Water Bodies
- · Wetlands
- · Marshes / Bayous / Wetlands
- · Streams / Rivers
- Estuaries
- Ponds / Lakes / Reservoirs
- . Drainage Ditches / Canals
- . Other slow-moving or still water bodies

In cases where there is minimal or no outflow to public water bodies, LPI Imazapyr Pro VM & Aquatic Herbicide can be applied to private waters that are still, such as ponds, lakes and drainage ditches.

LPI Imazapyr Pro VM & Aquatic Herbicide does not control plants that are completely submerged or have a majority of their foliage under water.

#### **AQUATIC USE PRECAUTIONS AND RESTRICTIONS**

Applications may only be made by licensed or certified applicators making applications for programs sponsored by federal or state government agencies such as Water Management Districts, Municipal Authorities or the U.S. Army Corps of Engineers.

Permits may be required to treat public water bodies; consult your local state fish and game agency and water control authorities before making applications of LPI Imazapyr Pro VM & Aquatic Herbicide to public water.

Only invasive plants or plants determined to be a nuisance by a federal or state governmental agency may be treated. DO NOT apply to water bodies or portions of water bodies where emergent and/or floating weeds do not exist.

DO NOT apply more than 6 pints of product (1.5 lbs acid equivalent) per acre per year.

Aerial application may be made only by helicopter.

#### Precautions for Potable Water Intakes:

LPI Imazapyr Pro VM & Aquatic Herbicide may NOT be applied directly to water within onehalf mile upstream of an active potable water intake in flowing water bodies such as rivers or streams.

LPI Imazapyr Pro VM & Aquatic Herbicide may NOT be applied within one-half mile of an active potable water intake in a standing water body such as a reservoir, lake or pond.

If aquatic applications within one-half mile of active potable water intakes need to be made, the water intake must be turned off during application and for a minimum of 48 hours after the application. This type of application may only be made if there are alternative water sources or holding ponds that permit an active potable water intake to be turned off of for a minimum 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 of water in terrestrial use sites.

#### Restrictions for Irrigation Water:

Any water treated with LPI imazapyr Pro VM & Aquatic Herbicide must not be used for irrigation purposes for 120 days after application or until residue levels are determined by laboratory analysis to be 1.0 ppb or less.

Apply LPI Imazapyr Pro VM & Aquatic Herbicide to irrigation canals or ditches ONLY if the above restriction can be observed.

DO NOT apply LPI Imazapyr Pro VM & Aquatic Herbicide within one mile of an active irrigation water intake in lakes or reservoirs during the irrigation season. Applications closer than one mile from an inactive irrigation water intake may be made during the off-season, provided that the above restriction can be observed.

DO NOT apply LPI Imazapyr Pro VM & Aquatic Herbicide within one-half mile downstream of an active irrigation water intake. If making applications upstream of an active irrigation water intake, the intake must be turned off until the treated water upstream has flowed completely past the irrigation intake.

Before applying LPI Imazapyr Fr. VM & Aquatic Herbicide upstream of an active irrigation water intake, consult your local, state and/or federal authorities.

## INSTRUCTIONS FOR AQUATIC APPLICATIONS

LPI Imazapyr Pro VM & Aquatic Herbicide has little to no effect on submerged aquatic vegetation and must be applied to the emergent foliage of the target vegetation. In general, applications should be made in a manner that maximizes spray interception by the target vegetation and minimizes overspray into the water. LPI Imazapyr Pro VM & Aquatic Herbicide may be applied as a draw down treatment in areas described above by applying to weeds after water has been drained and then allowing 14 days before reintroducing water to the drained area.

- For best results, weeds should be growing vigorously at the time of application and the spray solution should include a surfactant (see the ADJUVANTS section of this label for specific instructions).
- Aquatic applications of LPI Imazapyr Pro VM & Aquatic Herbicide should be made in a minimum of 5 gallons of water per acre using surface or helicopter application equipment.
- To prevent concentration of this herbicide in water, applications to moving bodies of water should be made while traveling upstream.
- Do not treat more than one half of the surface area of the water in a single operation and wait at least 10 to 14 days between treatments.
- To allow fish to move into untreated areas, begin applications along the shore proceed outwards in bands.
- Because oxygen depletion due to decaying vegetation may result in the suffocation of some sensitive fish species, when the target vegetation covers a large percentage of the surface area of a slow or non-flowing water body, the area should be treated in strips.
- For one hour after application, avoid wash-off of sprayed foliage by spray boat recreational boat backwash.

#### **AQUATIC AERIAL APPLICATIONS**

Refer to the MIXING AND APPLICATION INSTRUCTIONS section for information regarding aerial applications of LPI Imazapyr Pro VM & Aquatic Herbicide.

Refer to the PRECAUTION FOR AVOIDING INJURY TO NON-TARGET PLANTS section for guidance in minimizing unwanted exposure to non-target plants when making aerial applications.

NOTE: Aerial applications may be made only by helicopter.

**Preparation:** Mix LPI Imazapyr Pro VM & Aquatic Herbicide for the intended use as per the instructions in the AQUATIC PESTS CONTROLLED tables below.

Adjuvants: For best results, a nonionic or silicon based surfactant or methylated seed oil should be added, refer to the ADJUVANT section of this label for specific instructions).

If needed, a foam reducing agent may be added.

Tank Mixes:To enhance the spectrum or control of emergent and floating aquatic vegetation, LPI Imazapyr. Pro VM & Aquatic Herbicide may be tank mixed with other aquatic use herbicides. Always follow the more restrictive label when making an application involving tank mixes. This product may be tank-mixed with products listed provided the tank-mixed product is registered for use on this (these sites). Follow the more restrictive use directions, precautions, and limitations on the labels of the products in the tank mix.

Application: Uniformly apply the specified amount of LPI Imazapyr Pro VM & Aquatic Herbicide in 5 to 30 gallons of water per acre following the instructions for aerial applications in the MIXING AND APPLICATION INSTRUCTIONS section at the beginning of this label.

**Precautions:** DO NOT make applications by helicopter unless appropriate buffer zones to prevent spray drift out of the target area can be maintained, or when spray drift damage as a result of helicopter application can be tolerated.

Application equipment, including landing gear must be thoroughly cleaned 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.

#### **AQUATIC GROUND APPLICATIONS**

LPI Imazapyr Pro VM & Aquatic Herbicide may be applied using any of the ground application methods described in the MIXING AND APPLICATION INSTRUCTIONS section at the beginning of this label.

Refer to the AQUATIC SITES CONTROLLED tables below for specified use rates and species specific instructions.

#### **GROUND APPLICATION PRECAUTIONS:**

DO NOT apply more than 6 pints of LPI Imazapyr Pro VM & Aquatic Herbicide per acre.
 When making applications do not apply to the point of run off of spray solution from the target vegetation.

#### AQUATIC PESTS CONTROLLED

LPI Imazapyr Pro VM & Aquatic Herbicide will control the following target species as specified in the APPLICATION RATE section of the table. Rate instructions 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 1.5 quarts of LPI Imazapyr Pro VM & Aquatic Herbicide per acre.

11 21

actively growing foliage.
Be sure to cover all actively 2.0-3.0 dds snyy Sumac being sure to cover all Apply early postemergence Polygonum spp. **Smartweed** 0.25% v/v NIS Mazapyr Pro VM & Aquatic Herbicide IQJ to noitulos %0.1 with 0.25% v/v NIS Spot Applications: Mazapyr Pro VM & Aquatic Herbicide for at least two years. Id sheup 0.5 Tamarisk Do not disturb treated plants Aerial Applications: dds xuewel angustifolia Saltcedar; growing foliage. Be sure to cover all actively รกนธ์ยอยเล 0.4-0.2 Russian Olive growing foliage. growing foliage. Be sure to cover all actively arundinacea Rose, Swamp 0.5-0.5 Rosa palustris growing foliage. Be sure to cover all actively Reed Canarygrass 0.4-0.8 Be sure to cover all actively Herbicide with 1.0 Quart MSO 0.1 Lythrum salicaria Purple Loosestrife stage but prior to flowering. postemergence to rosette VM & Aquatic 2.0 LPI Imazapyr Pro Apply preemergence or Conium maculatum Poison Hemlock necessary in the south. the north, higher rates are rates will provide control in tall before applying. Lower regrow to approximately 5' treatment site and allow to of dead stem tissue is evident, mow or burn the elongation. If large amounts Toliage affer full leaf Common Reed not provide control.

Apply to all actively growing Phragmites; Phragmites australis 0.9-0.4 that are not incorporated will reemergence applications application preemergence. as an incorporated foliage postemergence, or Apply to all actively growing Cyperus spp. **Nutsedge** 0.84 MSO 0.8-0.9 being sure to cover all actively growing foliage. O.f rational A MV A Aquatic Herbicide with 1.0 n water. 2.0 LPI Imazapyr Pro Apply early postemergence Nutgrass; Kili'p'opu Cyperus rotundus OSM noitulos %2S.f TUTTNET INSTRUCTIONS. alyphosate and Treatments above for to noitulos %25 Stump and Cut Stem Aquatic Herbicide with see the instructions for MV o19 1yqeseml for the adjuvant.
Spot Applications:
25% solution of LPI a min or stump treatment, For spot treatment apply as methylated seed oil of 10 gallons/acre. quarts / acre of cross passes using a rate p esu stiusen 18ed owt to muminim s dtiw spray adjuvant. For applications apply aerially slyphosate and a all actively growing foliage. For broadcast foliar VM & Aquatic Herbicide with 6.0 applications be sure to cover 6.0 LPI Imazapyr Pro quinquenervia Paperbark tree actively growing foliage. For ground foliar stablished Stands: Melaleuca Melaleuca; peing sure to cover all untebideum asaugdge Apply postemergence only, шпиоблио Knotweed, OSM thaup 0.1 dilw 0.4-0.8 Aquatic rierbicide begin to senesce Mazapyr Pro VM & Apply in the fall after plants IGJ 0.8-0.2 dds earnetuag Knapweeds growing foliage. Be sure to cover all actively Echinochloa Junglerice 0.4-0.8 cover all actively growing seed head. Be sure to growing but before setting Apply when plant is actively 0.4-0.8 Phyllostachys aurea Golden Bamboo to cover all actively growing Apply in spring, being sure 0.9-0.4 Arundo donax Giant Reed; growing foliage. Be sure to cover all actively (pints/acre) Butumu typia Flowering Rush SPECIFIC INSTRUCTIONS APPLICATION RATE SCIENTIFIC NAME TERRESTRIAL / MARGINAL SPECIES
COMMON NAME | SCIENTIFIC N

Be sure to cover all actively growing foliage.

Be sure to cover all actively growing foliage.

growing foliage.

Dunds and in bunawoit

Apply to foliage when

actively growing tollage.

γρρίγ εατίγ ροστεπιστηστο

being sure to cover all

0.6-0.5

1.0-2.0

OSM TISUD O.1 Aliw

Mazapyr Pro VM & Aquatic Herbicide

I-0-2.0 LPI

Salix spp.

Cardaria draba

зинспш церепя

# LPI IMAZAPYR PRO VM & AUUATIC HERBICIDE EPA REG. NO. 34704-973

lepant Grass; lapier Grass	Pennisetum murpureum	3.0	Be sure to cover all actively growing foliage.
			growing foliage.
utgrass	Zizaniopsis miliacea	0.8-0.4	growing foliage.  Be sure to cover all actively
ordgrass, prairie	Spartina spp.	- 0.8-0.4	Be sure to cover all actively
		with MSO (as per label instructions)	
		Aquatic Herbicide	fall to all new growth.
		Imazapyr Pro VM &	to be treated. Apply in the
ogon Grass	Imperata cylindrical	2.0 quarts LPI	Burn foliage and till the area
Shinese Tallow Tree	Sapium sebiferum	2.1-0.1	north. Apply to folisge.
			should provide control in the
			south and lower rates
			full leaf elongation. Higher rates should be used in the
listle	Typha spp.	0.2-0.1	Apply to green foliage after
hristmasberry	terebinthifolius		
razilian Pepper;	Schinus	1.0-2.0	Apply to foliage.
			cover all actively growing foliage.
			seed head. Be sure to
apanese			growing but before setting
'ouppoo'	Phyllostachys spp.	3.0-4.0	Apply when plant is actively
quatic; lightshade	tampicense		
oda Apple,	Solanum	2.0	
		(pints/acre)	AND THE RESERVE
ERRESTRIAL / MAI	SCIENTIFIC NAME	APPLICATION RATE	SPECIFIC INSTRUCTIONS
IAM / IAIST23883	SCINAL SPECIES		
sisnayengur			may result in reduced control.
Vater Primrose	гібімри	0.9-0.4	Tank mixing with glyphosate
			foliage.
			cover all actively growing
Vater Lilly	Мутрћава одогата	0.6-0.2	Apply in 100 gallons of water per acre. Be sure to
- All Lastell	oyosopo sooqoosiy	0000	growing foliage.
			sure to cover all actively
oco Yam			adhesion to the foliage. Be
asheen; lephant's Ear;	escnjentum		water per acre with an adjuvant to enhance
aro, Wild;	Colocasia	0.8-0.4	to anollag 001 ni ylqqA
			foliage.
			water per acre. Be sure to cover all actively growing
ickerelweed	Pontederia cordata	2.0-3.0	to anollsg 001 ni ylqqA
	TELEVISION OF THE PERSON NAMED IN	L - Control	foliage.
			water per acre. Be sure to cover all actively growing
еппумой	Hydrocotyle spp.	1.0-2.0	to anollag 001 ni ylqqA
			all actively growing foliage.
			sufficient herbicide uptake to take place. Be sure to cover
	adnaticum		the waterline in order for
arrot feather	Myriophyllum	1.0-2.0	There must be foliage above
			foliage.
			water per acre. Be sure to cover all actively growing
acopa, lemon	Bacopa spp.	1.0-2.0	to anollag 001 ni ylqqA
			foliage.
otsto-Potato			water per acre. Be sure to cover all actively growing
rrowhead,	Sagittaria spp.	1.0-2.0	to anollag 001 ni ylqqA
THE PARTY NAMED IN		DEPOSIT NOT HE	necessary for control.
			Imazapyr Pro VM & Aquatic Herbicide rates will be
			glyphosate or higher LPI
			foliage. Do not mix with
	philoxeroides		water per acre. Be sure to cover all actively growing
lligatorweed	Alternanthera	0.4-0.1	to anolise 001 ni ylqqA
All provinces and the	State and the same	(pints/acre)	
OWWON NAME	SCIENTIFIC NAME	STAR NOITACILITY	SPECIFIC INSTRUCTIONS
			io Spiro I
			cover all actively growing foliage.
			water per acre. Be sure to
Vater Lettuce	Pistia stratiotes	1.0-2.0	to anollag 001 ni ylqqA
			cover all actively growing foliage.
	crassipes		water per acre. Be sure to
Vater Hyacinth	Eichhornia	1.0-2.0	to anollag 001 ni ylqqA
		etseordylg 0.6-0.4	foliage.
		Pro VM & Aquatic Herbicide with	water per acre. Be sure to cover all actively growing
ppadderdock	Nuphar luteum	1.0-2.0 LPI Imazapyr	to anollag 001 ni ylqqA
TO THURSDAY	LA TOTAL	TO PERSON NAMED IN	foliage.
			cover all actively growing
ridgoi	ribuods muidonmi s	1.0-2.0	Apply in 100 gallons of water per acre. Be sure to
1,4002		0001	water per acre.
Juckweed, Giant	Spirodela polyriza	2.0-3.0	to anollag 00 t ni ylqqA
Annia beautient		THE RESERVE	water per acre.
	בפווווק עווווסן	0.6-0.2	10 SHOURS ON THE RIGHTS OF
лскиева	топіт вптэд	(pints/acre) 2.0-3.0	to anollag 001 ni ylqqA

Willow

White Top; Hoary

Torpedo Grass

Glory; Water

Swamp Morning

Spinach; Kangkong

# LPI IMAZAPYR PRO VM & AUJATIC HERBICIDE EPA REG. NO. 34704-973

#### 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 must be disposed

of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at www.acrecycle.org. If not recycled, then puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

For packages up to 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 Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For packages greater than 5 gallons and less than 56 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. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. For packages greater than 56 gallons: 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.

For refillable containers: 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.

For help with any spill, leak, fire or exposure involving this material call day or night CHEMTREC 1-800-424-9300.

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