

# IMOX™

## HERBICIDE

# Specimen Label

**A herbicide for the selective management of undesirable vegetation in and around aquatic sites and terrestrial non-crop areas, industrial sites and rights-of-ways. The herbicide may be used on listed sites that are cut for hay or grazed.**

**ACTIVE INGREDIENT:**  
Ammonium salt of imazamox\* ..... 12.1%  
**OTHER INGREDIENTS:** ..... 87.9%  
**TOTAL:** ..... 100.0%  
\*Equivalent to 11.4% imazamox acid  
Contains 1 pound of imazamox acid equivalent per gallon.

EPA Reg. No. 81927-66

## 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.)

**Manufactured for:**  
Alligare, LLC  
13 N. 8th Street  
Opelika, AL 36801

FIRST AID	
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eyes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth to mouth if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>
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:** Harmful if absorbed through skin or inhaled. Causes moderate eye irritation. Avoid breathing spray mist. Avoid contact with skin, eyes or clothing.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber (includes natural rubber blends and laminates) ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils, or viton ≥ 14 mils
- Shoes plus socks

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

### USER SAFETY RECOMMENDATIONS

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

### ENVIRONMENTAL HAZARDS

This pesticide may be hazardous to plants outside the treated area. Do not apply to water except as specified in this label. Do not contaminate water when disposing of equipment washwater and rinsate.

### PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow coming in contact with oxidizing agents. Hazardous Chemical Reaction may occur.

## DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at the time of pesticide application.

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.

Read the entire label before using Alligare IMOX™ Herbicide. Consult your State Agricultural Experimental Station or Extension Service Specialist for additional information on application timing, rates and any additional requirements or restrictions.

Ensure spray drift to non-target susceptible species does not occur.

**DO NOT** apply Alligare IMOX Herbicide in any manner not specifically described in this label.

### Endangered Plant Species

To prevent potential negative impacts to endangered plant species, **DO NOT** apply Alligare IMOX Herbicide in a way that adversely affects federally listed endangered and threatened species.

### PRODUCT INFORMATION

Alligare IMOX Herbicide is a water miscible concentrate designed to mix with water to form a solution. It may be diluted with water or applied directly to aquatic sites for selective vegetation management of susceptible aquatic vegetation or diluted and applied as a broadcast or spot spray to control target floating and emergent terrestrial and riparian vegetation.

Aquatic sites include: arroyos, bayous, canals and irrigation canals, creeks, ditches, estuarine sites, marine sites, lakes, marshes, ponds, reservoirs, rivers, slow-moving or quiescent bodies of water, streams, swamps and wetlands. The sites listed above may be treated with Alligare IMOX Herbicide during drawdown conditions.

Alligare IMOX Herbicide may also be applied for terrestrial and riparian vegetation control in industrial noncropland sites, and railroad, utility, and highway rights-of-way. Industrial noncropland sites include utility plant sites, tank farms, pumping installations, storage areas, fence rows and ditch banks. Alligare IMOX Herbicide may also be used for the establishment and maintenance of wildlife openings. The sites listed above and treated with Alligare IMOX Herbicide may be grazed or cut for hay.

Alligare IMOX Herbicide is an imidazolinone class herbicide that works by inhibition of acetolactate synthase (ALS) enzyme. Alligare IMOX Herbicide is quick to act by absorption and translocation into the foliage and/or roots, thus inhibiting plant growth. Once target plant growth is inhibited, leaves and growing points begin to discolor, followed by plant death or severe growth inhibition.

Many factors such as application rate, weed species, weed pressure, conditions of weeds including size and climatic factors impact the degree of weed control. Applications made to actively growing weeds at the early stages of development will optimize performance.

Alligare IMOX Herbicide is effective for the control/suppression of common problematic submersed, emergent and floating broadleaf and monocot aquatic vegetation. The degree of control and selectivity can be managed by timing, use rates, and application technique.

Specific use directions will be found in the following sections below:

- Terrestrial Sites
  - Foliar Broadcast Application
  - Foliar Spot Treatment Application
  - Injection (Hack and Squirt), Frill and Girdle, and Cut Stump application
  - Basal Application
- Aquatic Sites
  - Water Application to Submersed, Emergent and Floating Vegetation.
  - Foliar Application to Emergent and/or Floating Vegetation.
  - Aerial Application
  - Drawdown Application

### RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, Alligare IMOX Herbicide is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to Alligare IMOX Herbicide and other Group 2 herbicides. Weed species with acquired resistance to Group 2 herbicides may eventually dominate the weed population if Group 2 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by Alligare IMOX Herbicide or other Group 2 herbicides.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

To delay herbicide resistance:

- Avoid the consecutive use of Alligare IMOX Herbicide or other target site of action Group 2 herbicides that might have a similar target site of action, on the same weed species.
- Use tank mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action and are both effective at the tank mix or prepack rate on the weed(s) of concern.
- Base herbicide use on a comprehensive Integrated Pest Management (IPM) program.
- Scout fields prior to application to identify the weed species present and their growth state to determine if the intended application will be effective.
- Scout fields after application to verify that the treatment was effective.

• Contact your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

Report any incidence of non-performance of this product against a particular weed species to your Alligare LLC retailer, representative or call 888-252-4427. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemicals means to remove escapes, as practical, with the goal of preventing further seed production.

### ADJUVANTS

For applications of **Alligare IMOX Herbicide** to emergent, floating or shoreline species, use of a spray adjuvant is required. The spray adjuvant used needs to be appropriate for aquatic sites.

**Nonionic Surfactants:** Use a nonionic surfactant at 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:** Methylated seed oil (MSO) or vegetable oil concentrate (VOC) may be used in replacement of a surfactant at 1.5 to 2 pints per acre. When using spray volumes greater than 30 gallons per acre, mix methylated seed oil or vegetable oil concentrates at 1% v/v of the total spray. The data indicates MSO aids in the deposition and imazamox uptake by plants under stress.

**Silicone-Based Surfactants:** Silicone-based surfactants allow greater spreading of the spray droplet on the leaf surface, as compared to conventional nonionic surfactants. However, some silicone-based surfactants may dry too quickly and limit herbicide uptake or cause a target floating plant to sink quickly.

Refer to the surfactant manufacturer's label for specific rates.

**Invert Emulsions:** **Alligare IMOX Herbicide** may be applied as an invert emulsion spray. Prior to preparing an invert emulsion (water – oil) spray, conduct a jar test to check spray mixture compatibility. Invert emulsion sprays are designed to minimize spray drift and spray runoff, resulting in more herbicide on the target foliage. Use a single tank (batch mixing) or injected (in-line mixing) to prepare the invert emulsion spray. Refer to the emulsifier manufacturer's label for specific rates and proper mixing directions for aquatic sites.

**Other:** An antifoaming agent, spray pattern indicator, sinking or drift control agent may be applied at the product labeled rate if necessary or desired.

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

### SPRAY DRIFT MANAGEMENT (Mandatory)

#### Aerial Applications

- Do not release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the application site.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

#### Ground Applications

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above existing terrestrial or aquatic vegetation.
- For all applications, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

### SPRAY DRIFT ADVISORIES

- THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
- BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### • IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly under unfavorable environmental conditions.

#### Controlling Droplet Size - Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### Controlling Droplet Size - Aircraft

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

#### • BOOM HEIGHT - Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the application site and have minimal bounce.

#### • RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift. When applying aerially, do not release spray at a height greater than 10 ft above the canopy, unless a greater application height is necessary for pilot safety.

#### • SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

#### • TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

#### • TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

#### • WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### TERRESTRIAL USE DIRECTIONS

Apply **Alligare IMOX Herbicide** with ground and aerial equipment including both fixed-wing aircraft and helicopter in sufficient water to obtain uniform distribution of spray to targeted foliage. Use foliar broadcast spray, foliar spot spray, injection (hack and squirt), frill and girdle, cut stump, or basal methods of applications.

#### Broadcast Spray Application

DO NOT apply more than 1 gallon of **Alligare IMOX Herbicide** per acre per year.

#### Foliar Spot Application

Apply as a solution containing up to 5% v/v **Alligare IMOX Herbicide** spray.

#### Injection (Hack and Squirt), Frill and Girdle, and Cut Stump Application

Treatments may be made using up to 100% v/v **Alligare IMOX Herbicide** solution.

#### Basal Application

Treatments can be made using up to 25% v/v **Alligare IMOX Herbicide** spray. Basal applications require the use of a good emulsion system to maintain **Alligare IMOX Herbicide** in a stable emulsion with a penetrating agent.

### TERRESTRIAL RESTRICTIONS

DO NOT apply more than 1 pound of imazamox acid equivalent (1 gallon) per acre per year.

DO NOT exceed 2 applications of **Alligare IMOX Herbicide** per year.

Minimum Retreatment Interval: 14 days

#### Vegetation Controlled

**Alligare IMOX Herbicide** may be used for the control of the following plant species.

**Alligare IMOX Herbicide** may be effective for the control or suppression of additional plant species not listed below. The use of **Alligare IMOX Herbicide** for the control or suppression of undesirable plants not listed below may be done at the discretion of the user.

To the extent consistent with applicable law, the user assumes responsibility for any lack of control or suppression associated with application to weeds not listed on this label.

#### Foliar Application- Species Controlled

Common Name	Scientific Name	Rate Foliar (fl . oz./A)	Note(s)
Alligator weed	<i>Alternanthera philoxeroides</i>	64 - 128	A.
Annual ryegrass	<i>Lolium multiflorum</i>	16 - 32	
Artichoke, Jerusalem	<i>Helianthus tuberosus</i>	64 - 128	
Bedstraw	<i>Galium aparine</i>	64 - 128	
Beet, wild	<i>Beta procumbens</i>	64 - 128	
Brazilian pepper* Christmasberry*	<i>Schinus terebinthifolius</i>	96 - 128	B.
Buckwheat, wild	<i>Polygonum convolvulus</i>	64 - 128	
Buttercup	<i>Ranunculus</i> spp.	64 - 128	
California bulrush*	<i>Schoenoplectus californicus</i>	64 - 128	
Camphor tree*	<i>Cinnamomum camphora</i>	2% - 5% v/v	
Canola, volunteer (non-Clearfield®)	<i>Brassica campestris</i> <i>Brassica napus</i>	64 - 128	
Cattail	<i>Typha</i> spp.	32 - 64	
Cockleweed, common	<i>Stellaria media</i>	64 - 128	
Chinese tallowtree Popcorn tree	<i>Sapium sebiferum</i>	64 - 128	C.
Cocklebur, common	<i>Xanthium strumarium</i>	64 - 128	
Filaree, redstem Filaree, whitestem	<i>Erodium cicutarium</i> <i>Erodium moschatum</i>	64 - 128	

Common Name	Scientific Name	Rate Foliar (fl. oz./A)	Note(s)
Flixweed	<i>Descurainia sophia</i>	64 - 128	
Giant ragweed**	<i>Ambrosia trifida</i>	32 - 64	
Henbit	<i>Lamium amplexicaule</i>	64 - 128	
Jamaican nightshade*	<i>Solanum jamaicense</i>	2% - 5% v/v	
Japanese stiltgrass	<i>Microstegium vimineum</i>	32 - 64	D. & E.
Jimsonweed	<i>Datura stramonium</i>	64 - 128	
Johnsongrass, rhizome	<i>Sorghum halepense</i>	32 - 64	
Johnsongrass, seedling		16 - 32	
Knotted, prostrate	<i>Polygonum aviculare</i>	64 - 128	
Kochia	<i>Kochia scoparia</i>	64 - 128	
Lambsquarters, common	<i>Chenopodium album</i>	64 - 128	
Lettuce, miner's	<i>Mantia perfoliata</i>	64 - 128	
Mallow, common	<i>Malva neglecta</i>	64 - 128	
Mallow, Venice	<i>Hibiscus trionum</i>		
Mustard spp.	<i>Brassica</i> spp.	64 - 128	
Nettle, burning	<i>Urtica urens</i>	64 - 128	
Nettleleaf goosefoot	<i>Chenopodium murale</i>	64 - 128	
Nightshade, black	<i>Solanum nigrum</i>	64 - 128	
Nightshade, Eastern black	<i>Solanum ptycanthum</i>		
Nightshade, hairy	<i>Solanum sarrachoides</i>		
Old World climbing fern*	<i>Lygodium microphyllum</i>	5% v/v	
Pennycress, field	<i>Thlaspi arvense</i>	64 - 128	
Phragmites*	<i>Phragmites australis</i>	64 - 128	F., G. & H.
Pigweed, prostrate	<i>Amaranthus blitoides</i>	64 - 128	
Pigweed, redroot	<i>Amaranthus retroflexus</i>		
Pigweed, smooth	<i>Amaranthus hybridus</i>		
Pigweed, spiny	<i>Amaranthus spinosus</i>		
Puncturevine	<i>Tribulus terrestris</i>	64 - 128	
Purple loosestrife*	<i>Lythrum salicaria</i>	32 - 64	
Purslane, common	<i>Portulaca oleracea</i>	64 - 128	
Radish, wild	<i>Raphanus raphanistrum</i>	64 - 128	
Ragweed, common	<i>Ambrosia artemisiifolia</i>	64 - 128	
Ragweed, giant	<i>Ambrosia trifida</i>		
Rocket, London	<i>Sisymbrium irio</i>	64 - 128	
Rocket, yellow	<i>Barbarea vulgaris</i>		
Saltcedar*	<i>Tamarix</i> spp.	64 - 128	B. & D.
Sedge*, purple	<i>Cyperus rotundus</i>	32 - 64	B.
Sedge*, yellow	<i>Cyperus esculentus</i>		
Shepherd's-purse	<i>Capsella bursa-pastoris</i>	64 - 128	
Smartweed, ladysthumb	<i>Polygonum persicaria</i> , <i>Persicaria maculosa</i>	64 - 128	
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i> , <i>Persicaria pennsylvanica</i>		
Smartweed, swamp	<i>Polygonum coccineum</i> , <i>Persicaria amphibia</i>		
Spike rush*	<i>Eleocharis</i> spp.	64 - 128	
Spurge, prostrate	<i>Euphorbia maculata</i>	64 - 128	
Sunflower, common	<i>Helianthus annuus</i>	64 - 128	
Swinecress	<i>Coronopus didymus</i>	64 - 128	
Tansymustard, green	<i>Descurainia pinnata</i>	64 - 128	
Taro	<i>Taro</i> spp.	64 - 128 5% v/v	
Thistle, Russian	<i>Salsola iberica</i>	64 - 128	
Tropical soda apple*	<i>Solanum viarum</i>	2% - 5% v/v	
Water primrose	<i>Ludwigia</i> spp.	32 - 64	A.
Wetland nightshade*	<i>Solanum tampicense</i>	2% - 5% v/v	
Whitetop*	<i>Cardaria draba</i>	8 - 16	
Hoary cress*			
Willoweed panicle	<i>Epilobium brachycarpum</i>	64 - 128	
Velvetleaf	<i>Abutilon theophrasti</i>	64 - 128	

\* Not approved for this use in California.  
\*\* Suppression of larger, well-established plants

- A. Use with an appropriate labeled glyphosate product will improve efficacy.
- B. Also use a 2% - 5% v/v **Alligare IMOX Herbicide** spray
- C. See Special Weed Control section.
- D. Use MSO at 1% v/v by spray.
- E. **Alligare IMOX Herbicide** will provide some residual control of subsequent seedling emergence.
- F. Use 1 quart per acre of methylated seed oil (MSO); apply in late vegetative stage up to killing frost.
- G. Also use a spot treatment with 1% - 2% v/v **Alligare IMOX Herbicide** spray.
- H. Older stands of phragmites and stands growing in water may require follow-up applications to control.

For optimum control with foliar applications, use methylated seed oil (MSO) at 1% v/v spray.

#### Specific Weed Control - Chinese Tallowtree

Apply **Alligare IMOX Herbicide** at 64 - 128 fluid ounces per acre or 0.5 - 2.0% v/v spray as a foliar application for selective control of Chinese tallowtree in and around tolerant tree species. Control Chinese tallowtree with foliar applications using aerial, handgun, or backpack application methods. Use an application method and spray volume that provides adequate coverage of targeted Chinese tallowtree plants. Add methylated seed oil at 1 quart

per acre for broadcast applications, or at 1% v/v for spot backpack and handgun applications. Tolerant hardwood species may exhibit varying degrees of leaf discoloration and temporary injury.

#### Areas that may be Grazed or Cut for Hay

**Alligare IMOX Herbicide** applied to listed aquatic and terrestrial non-crop sites may be grazed or cut for hay at a maximum use rate of 1 gallon per acre of **Alligare IMOX Herbicide** or 5% v/v spray for spot treatments. There are no grazing or haying restrictions.

#### AQUATIC USE DIRECTIONS

Apply **Alligare IMOX Herbicide** beneath the water surface or broadcast directly to the water surface for the control of target submersed aquatic plant species and for some emergent and floating species, or as a foliar broadcast application for emergent and floating species.

Apply **Alligare IMOX Herbicide** with ground and aerial equipment including both fixed-wing aircraft and helicopter in sufficient water to obtain uniform distribution of spray to water surface and/or targeted foliar applications.

#### Water Application to Submersed, Emergent and Floating Vegetation

Inject below the water surface or broadcast apply to the water surface with **Alligare IMOX Herbicide** to control submersed aquatic plant species and some emergent and floating species. Apply **Alligare IMOX Herbicide** as an undiluted product or diluted with water prior to application. When surface-matted conditions exist, inject **Alligare IMOX Herbicide** below the water surface to improve product distribution and efficacy.

Apply **Alligare IMOX Herbicide** to water to achieve a final concentration of the active ingredient of no more than 500 ppb. To maintain the desired vegetation response, multiple applications of **Alligare IMOX Herbicide** may be made during the annual growth cycle.

#### Alligare IMOX Herbicide Rates Per Treated Surface Acre

Average Water Depth of Treatment Site (feet)	Desired Active Ingredient Concentration (ppb)*			
	50	100	200	500
	Alligare IMOX Herbicide Rate per Treated Surface Acre (fl. oz.)			
1	17	35	69	173
2	35	69	138	346
3	52	104	207	518
4	70	138	277	691
5	87	173	346	864
6	104	207	415	1037
7	122	242	484	1210
8	139	277	553	1382
9	157	311	622	1555
10	174	346	691	1728

\* **Alligare IMOX Herbicide** contains 1.0 pound of imazamox acid equivalent per gallon. 1 gallon = 128 fl. oz.

#### Foliar Application to Listed Emergent and/or Floating Vegetation

Broadcast apply or spot treat the water surface with **Alligare IMOX Herbicide** to control emergent and floating species. For broadcast applications, use a minimum of 10 gallons of water per surface acre in properly calibrated equipment for uniform coverage. Use higher spray volumes to ensure uniform spray coverage, when treating areas with large and/or dense vegetation. To minimize the drift potential, use an appropriate spray pressure depending upon spray equipment, conditions and application objectives. (See Spray Drift Ground Boom Application Requirements section.) As a spot treatment, use from 0.25 - 5% v/v **Alligare IMOX Herbicide** spray.

To enhance foliar applications on emergent and floating weeds, always use an adjuvant. If spray is washed off by wave action, control will be reduced.

In aquatic sites, application techniques described in the **Terrestrial Use Directions** section may be used to treat target emergent vegetation.

#### Aerial Application

Both fixed-wing aircraft and helicopter may be used to apply **Alligare IMOX Herbicide** by air. For direct applications to the water, there is no minimum spray volume. For broadcast applications targeting emergent and/or floating vegetation, use a minimum of 5 gallons of water per surface acre in properly calibrated equipment for uniform coverage. For aerial applications, best results are obtained by using a minimum of 20 gallons per acre. (See Spray Drift Aerial Application Requirements section.)

#### Drawdown Application

**Alligare IMOX Herbicide** may be used for preemergence and/or postemergence control/suppression of aquatic vegetation in drawdown situations. As a broadcast spray, apply **Alligare IMOX Herbicide** at rates up to 1 gallon per acre or as a spot treatment with up to 5% v/v **Alligare IMOX Herbicide** spray. After water has receded and exposed soil is moist to dry, make application. After foliar postemergence applications, delay at least two weeks before reintroducing water.

#### AQUATIC RESTRICTIONS

**DO NOT** exceed maximum use rate per application:

**Water treatment** - 500 parts per billion (ppb) (173 fluid ounces of **Alligare IMOX Herbicide** (1.35 pounds of imazamox acid equivalent) per acre foot)

**Foliar broadcast application** - 1 gallon **Alligare IMOX Herbicide** per acre (1.0 pound of imazamox acid equivalent) per acre



### Foliar spot application - up to 5% v/v Alligare IMOX Herbicide

#### Minimum Retreatment Intervals:

Water treatment - 14 days; unless the retreatment is following an initial water column application that has failed to maintain the original targeted ppb concentration.

Foliar broadcast applications – 14 days

Foliar spot applications – Retreat as needed

#### Irrigation Restrictions

- DO NOT** use treated water to irrigate greenhouses, nurseries, or hydroponics until the imazamox concentration has been determined by an acceptable method to be less than or equal to 1.0 ppb.
- DO NOT** plant sugar beets, onions, potatoes or non-Clearfield® canola in soils that have been previously irrigated with **Alligare IMOX Herbicide** treated water until a soil bioassay successfully demonstrates acceptable levels of crop tolerance. The only exception to this restriction is if the water is from foliar applications to emergent and/or floating vegetation in flowing water sites where it has been applied at less than or equal to 1.5 quarts per acre to waters with an average depth of greater than or equal to 4 feet.
- DO NOT** use **Alligare IMOX Herbicide** treated waters resulting in a concentration greater than 50 ppb for irrigation of established (emerged) plants until residue levels have been shown to be less than or equal to 50 ppb by an acceptable method.
- DO NOT** make **Alligare IMOX Herbicide** applications in and around golf course irrigation, sod farm irrigation, and vineyard irrigation waterbodies without testing potential irrigation water prior to irrigation and confirming the imazamox concentration to be less than or equal to 1.0 ppb.
- In still or quiescent waters, **DO NOT** use **Alligare IMOX Herbicide** treated water resulting in a concentration greater than 10 ppb for irrigation of newly seeded or newly established plants until imazamox residue levels have been shown to be less than or equal to 10 ppb by an acceptable method.
- Wait 24 hours before irrigating from still or quiescent waters after making an **Alligare IMOX Herbicide** application for sub-merged vegetation less than 100 feet from an irrigation intake.
- Wait 24 hours before irrigating from still and quiescent waters after making an **Alligare IMOX Herbicide** application to emergent and/or floating vegetation if greater than 25% of the surface area of the water body has been treated or application was made less than 100 feet from an irrigation intake.
- Flowing waters may be used to irrigate allowable sites with no restrictions when **Alligare IMOX Herbicide** is applied at less than or equal to 2 quarts per acre to waters with an average depth of greater than or equal to 4 feet.
- After application of **Alligare IMOX Herbicide** to dry irrigation canals/ditches below the high-water mark, the initial flush of water during recharge must not be used for irrigation purposes unless the imazamox concentration has been determined by an acceptable method to be less than 25 ppb.

**Alligare IMOX Herbicide** applied at less than or equal to 2 quarts per acre in or on waters with a minimum average depth greater than or equal to 4 feet, will result in imazamox concentrations less than 25 ppb.

#### Other Water Use Restrictions

There are no restrictions on livestock watering, swimming, fishing, domestic use, or use of treated water for agricultural sprays. No recharge flush or water use restrictions are required for applications to dry areas above the high-water line of irrigation canals or channels.

#### Potable Water

**Alligare IMOX Herbicide** may be applied to potable water sources at concentrations up to 500 ppb to within a distance of 1/4 mile from an active potable water intake. Within 1/4 mile of an active potable water intake, **Alligare IMOX Herbicide** may be applied, but water concentrations resulting from injection and/or foliar applications may not exceed 50 ppb. If water concentrations greater than 50 ppb are required, the potable water intake must be shut and, if necessary, an alternate water supply be made available until the water concentration can be shown to be less than 50 ppb by an acceptable method.

#### Vegetation Controlled or Suppressed

The performance of **Alligare IMOX Herbicide** is dependent upon many factors including: dose, time of year, stage of plant growth, plant susceptibility, environmental conditions, method of application, and water movement. The rate selection is partially dependent on characteristics of the treatment area and whether growth regulation or control is desired. A repeat application to control or suppress regrowth may be required depending on environmental and growing conditions. To determine best management practices to control individual species and to meet specific aquatic plant management objectives consult with the local extension service.

#### Emergent, Floating, and Shoreline Species

Common Name	Scientific Name	Rate (fl. oz./A)	Note(s)
Alligatorweed	<i>Alternanthera philoxeroides</i>	64 - 128	A. & B.
American lotus	<i>Nelumbo lutea</i>	64 - 128	
Arrowhead	<i>Sagittaria</i> spp.	32 - 64	
Cattail	<i>Typha</i> spp.	32 - 64	C.
Chinese tallowtree	<i>Sapium sebiferum</i>	64 - 128	
Common reed	<i>Phragmites</i> spp.	96 - 128	D. & E.
Common salvinia	<i>Salvinia minima</i>	32 - 64	F.
Floating heart	<i>Nymphoides</i> spp.	64 - 128	G.
Floating pennywort	<i>Hydrocotyle ranunculoides</i>	32 - 64	A.
Flowering rush	<i>Butomus umbellatus</i>	64 - 128	
Four-leaf clover	<i>Marsilea</i> spp.	32 - 64	
Frog's bit, Sponge plant	<i>Lymnobia</i> spp.	16 - 32	
Giant cane	<i>Arundo donax</i>	64 - 128	

Common Name	Scientific Name	Rate Foliar (fl. oz./A)	Note(s)
Japanese knotweed	<i>Polygonum cuspidatum</i>	64 - 128	
Mexican lily	<i>Nymphaea mexicana</i>	32 - 64	
Mosquito fern	<i>Azolla</i> spp.	-	G.
Parrotfeather	<i>Myriophyllum aquaticum</i>	64 - 128	H.
Pickernelweed	<i>Pontederia cordata</i>	32 - 64	
Saltcedar	<i>Tamarix</i> spp.	64 - 128	G.
Smartweed, ladysthumb	<i>Polygonum persicaria</i> , <i>Persicaria maculosa</i>	64 - 128	
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i> , <i>Persicaria pennsylvanica</i>		
Smartweed, swamp	<i>Polygonum coccineum</i> , <i>Persicaria amphibia</i>		
Spatterdock	<i>Nuphar lutea</i>	64 - 128	
Variable-leaf milfoil	<i>Myriophyllum heterophyllum</i>	64 - 128	K. & L.
Water chestnut	<i>Trapa natans</i>	64 - 128	M. & G.
Water hyacinth	<i>Eichhornia crassipes</i>	16 - 32	
Water lettuce	<i>Pistia stratiotes</i>	48 - 96	
Water lily	<i>Nymphaea</i> spp.	32 - 64	
Water primrose	<i>Ludwigia</i> spp.	32 - 64	B.
Watershield	<i>Brasenia schreberi</i>	48 - 64	
Wild taro	<i>Colocasia esculenta</i>	96 - 128	

- Repeat applications may be necessary.
- Use with an appropriate labeled glyphosate product for faster brownout.
- Apply after full greenup through killing frost.
- Apply with MSO; apply in late vegetative stage up to killing frost.
- Also apply as a spot treatment using 1% to 2% v/v **Alligare IMOX Herbicide** spray. Older stands of phragmites and stands growing in water may be more difficult to control and will require follow-up applications.
- Apply with MSO or MSO plus silicone-based surfactant; retreatment will be necessary.
- Also apply as a spot treatment using 2% to 5% v/v **Alligare IMOX Herbicide** plus 1% v/v MSO spray.
- Apply only to emergent vegetation.
- Apply with MSO (1% v/v) as an emergent foliar treatment when plants have emerged on the surface.
- Also apply as a spot treatment using 1% to 3% v/v **Alligare IMOX Herbicide** spray.
- Apply with MSO to emergent part of plant.

#### Vascular Aquatic Plant Control Using Surface or Injected Herbicide Applications (50-500 ppb)

There are three herbicide susceptibility levels of control for vascular aquatic plants: susceptible (50-200 ppb), intermediately susceptible (100-300 ppb) and partially susceptible (200-500 ppb).

Some vascular aquatic plants that are easy to control from foliar applications of **Alligare IMOX Herbicide** may be hard to control from in-water applications. Higher use rates may be required to achieve desired control/suppression in sites with high water exchange rates or when treating more mature or less susceptible plants or when targeting more difficult-to-control aquatic species or when treating small areas in larger bodies of water (partial or spot treatments). Lower concentrations are normally used when conducting early season large-scale treatments; when greater selectivity is desired; and treating larger areas, more immature or susceptible plants, and areas with less potential for rapid water exchange.

Use of lower rates may increase selectivity on some species within the same category. Effects on susceptible plants can range from control to growth regulation depending on treatment site characteristics, exposure time, and application rate. Susceptible plant species may exhibit herbicide stress or reduced growth during active treatment phases. Whole lake applications with lower rates may provide plant growth regulation or greater selectivity while higher rates will normally provide broader activity.

#### Vascular Aquatic Plant Susceptibility Chart

Common Name	Scientific Name	Rate (ppb)
American pondweed	<i>Potamogeton nodosus</i>	100 - 300
Bladderwort	<i>Utricularia</i> spp.	100 - 300
Bulrush	<i>Schoenoplectus californicus</i>	200 - 500
Cattail	<i>Typha</i> spp.	200 - 500
Coontail	<i>Ceratophyllum demersum</i>	200 - 500
Curlyleaf pondweed	<i>Potamogeton crispus</i>	50 - 200
Eelgrass, Japanese	<i>Zostera japonica</i>	200 - 500
Egeria	<i>Egeria densa</i>	200 - 500
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>	50 - 200
Flowering rush	<i>Butomus umbellatus</i>	200 - 500
Frog's bit	<i>Lymnobia spongia</i>	100 - 300
Hydrilla	<i>Hydrilla verticillata</i>	50 - 200
Illinois pondweed	<i>Potamogeton illinoensis</i>	100 - 300
Pickernelweed	<i>Pontederia cordata</i>	100 - 300
Salvinia	<i>Salvinia</i> spp.	100 - 300
Sago pondweed	<i>Stuckenia pectinata</i>	50 - 200
Southern naiad	<i>Najas guadalupensis</i>	200 - 500
Spatterdock	<i>Nuphar lutea</i>	200 - 500
Spikerush	<i>Eleocharis baldwinii</i>	100 - 300
Variable-leaf milfoil	<i>Myriophyllum heterophyllum</i>	100 - 300

Common Name	Scientific Name	Rate (ppb)
Water hyacinth	<i>Eichhornia crassipes</i>	50 – 200
Water lily	<i>Nymphaea odorata</i>	200 – 500
Watershield	<i>Brasenia schreberi</i>	200 – 500
Water stargrass	<i>Heteranthera dubia</i>	50 – 200
Wigeon grass	<i>Ruppia maritima</i>	100 – 300

### Specific Weed Control Directions

**For Eurasian Watermilfoil.** Use **Alligare IMOX Herbicide** at 100 - 200 ppb range early in the growing season to actively growing plants. Repeat applications may be required on mature Eurasian watermilfoil where the vegetation has topped out.

**For Hydrilla.** Use **Alligare IMOX Herbicide** at 150 - 200 ppb range early in the growing season to actively growing plants. Repeat applications may be required if the application is made prior to topped-out hydrilla. To suppress and growth-regulate hydrilla for up to 10 - 12 weeks, use a single application of 50 to 75 ppb. To extend the period of growth suppression when normal hydrilla growth resume, apply a second application of 50 to 75 ppb.

**For Japanese Eelgrass.** Since Japanese eelgrass is found in tidal and intertidal areas and is a submersed aquatic plant, apply **Alligare IMOX Herbicide** either directly in the water or directly to the plant (e.g. at low tide).

- **Low-tide application** - When the Japanese eelgrass is exposed at low tide, apply **Alligare IMOX Herbicide** uniformly with properly calibrated broadcast or spot treatment equipment in 10 or more gallons of water per acre.
  - Use of an appropriate spray adjuvant approved for aquatic is optional.
  - For spot treatments apply up to 5% v/v **Alligare IMOX Herbicide** spray. When treating areas with large and/or dense vegetation, higher spray volumes may be required. Depending upon spray equipment, conditions, and application objectives, adjust spray pressure to minimize drift potential.
  - For broadcast application, apply 4 - 32 fluid ounces per acre of **Alligare IMOX Herbicide**. Use the lower rate for management of seedlings.
- **In-water application** – If Japanese eelgrass is submersed, apply **Alligare IMOX Herbicide** as broadcast spray to the water surface or injected below the water surface. **Alligare IMOX Herbicide** may be applied as undiluted product or diluted with water before application. Under surface-matted conditions, inject **Alligare IMOX Herbicide** below the water surface to improve product distribution. Apply **Alligare IMOX Herbicide** to water to achieve a final concentration of the active ingredient of no more than 500 ppb. Multiple applications of **Alligare IMOX Herbicide** may be made during the annual growth cycle to maintain the desired vegetation response.

**For Sagó Pondweed.** In dry ditches (drainage and irrigation), sagó pondweed may be controlled or growth-suppressed with soil-applied **Alligare IMOX Herbicide** at 64 - 128 fluid ounces per acre. In irrigation canals, apply **Alligare IMOX Herbicide** after drawdown and prior to water recharge.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in original container only. Avoid freezing. Store above 32°F. If frozen, poor weed control may result. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste.

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

**(For rigid containers 5 gallons or less)**

**CONTAINER HANDLING:** Non-refillable container. Do not reuse or refill this container. 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.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **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 nonrefillable rigid containers larger than 5 gallons)**

**CONTAINER HANDLING:** Non-refillable container. Do not reuse or refill this container. 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.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**(For refillable rigid containers larger than 5 gallons)**

**CONTAINER HANDLING:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Offer for recycling, if available or recondition if appropriate 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.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

### Batch Code:

### CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

To the extent consistent with applicable law, upon purchase or use of this product, purchaser and user agree to the following terms:

**Warranty:** Alligare, LLC (the Company) warrants that this product conforms to the chemical description on the label in all material respects and is reasonably fit for the purpose referred to in the directions for use, subject to the exceptions noted below, which are beyond the Company's control. To the extent consistent with applicable law, the Company makes no other representation or warranty, express or implied, concerning the product, including no implied warranty of merchantability or fitness for a particular purpose. To the extent consistent with applicable law, no such warranty shall be implied by law, and no agent or representative is authorized to make any such warranty on the Company's behalf.

**Terms of Sale:** The Company's directions for use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, and the manner of use or application (including failure to adhere to label directions), all of which are beyond the Company's control. To the extent consistent with applicable law, all such risks are assumed by the user.

**Limitation of Liability:** To the extent consistent with applicable law, the exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damages, and in no event shall damages or any other recovery of any kind exceed the price of the product which caused the alleged loss, damage, injury or other claim. To the extent consistent with applicable law, under no circumstances shall the Company be liable for any special, indirect, incidental or consequential damages of any kind, including loss of profits or income. Some states do not allow the exclusion or limitation of incidental or consequential damages.

The Company and the seller offer this product, and the purchaser and user accept this product, subject to the foregoing warranty, terms of sale and limitation of liability, which may be varied or modified only by an agreement in writing signed on behalf of the Company by an authorized representative.

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