

SPECIMEN

Glufosinate

Group

10

Herbicide

# Finale<sup>®</sup> XL F-VM

## Herbicide

For nonselective postemergence weed control in industrial landscaping, tree production, and vegetation management sites

**Active Ingredient:**

glufosinate-ammonium\* ..... 24.50%\*\*

**Other Ingredients:** ..... 75.50%

**Total:** ..... 100.00%

\*CAS Number 77182-82-2

\*\*Equivalent to 2.34 pounds of active ingredient per U.S. gallon, formulated as a soluble concentrate

EPA Reg. No. 7969-464

EPA Est. No.

### KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

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

See full label for complete **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

**In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).**

**Net Contents:**

BASF Corporation  
26 Davis Drive  
Research Triangle Park, NC 27709

  
We create chemistry

<b>FIRST AID</b>	
<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.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin</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 swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• <b>DO NOT</b> induce vomiting unless told to by a poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>
<b>HOTLINE NUMBER</b>	
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).</p>	
<p><b>NOTE TO PHYSICIAN:</b> If this product is ingested, endotracheal intubation and gastric lavage must be performed as soon as possible, followed by charcoal and sodium sulfate administration. Additionally, call 1-800-832-HELP (4357) immediately for further information.</p>	

## Precautionary Statements

### Hazards to Humans and Domestic Animals

**WARNING.** Causes substantial but temporary eye injury. Harmful if absorbed through skin. Harmful if swallowed.

**DO NOT** get in eyes, on skin, or on clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using toilet. Remove and wash contaminated clothing before reuse.

### Personal Protective Equipment (PPE)

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear (goggles, face shield, or safety glasses)

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

### USER SAFETY RECOMMENDATIONS

#### Users must:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### Environmental Hazards

**DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate. Glufosinate-ammonium and its degradates have properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

**POLLINATOR ADVISORY.** This product contains a herbicide. Follow all label directions and precautions to minimize potential off-target exposure in order to prevent effects to nontarget plants adjacent to the treated site that may serve as habitat or forage for pollinators.

### Directions For Use

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

**Finale® XL F-VM herbicide is not for sale, distribution, or use in Nassau and Suffolk counties in New York State.**

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses; and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **12 hours**.

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

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear (goggles, face shield, or safety glasses)

## NONAGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. The applications for trimming and edging, industrial, recreational and public areas, and farmsteads are not within the scope of the WPS.

**DO NOT** enter treated areas without protective clothing until sprays have dried.

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

### Pesticide Storage

**DO NOT** use or store near heat or open flame. Keep the container tightly closed and dry in a cool, well-ventilated place. Storage temperature must not exceed 125° F. If storage temperature for bulk **Finale® XL F-VM herbicide** is below 32° F, the material must not be pumped until its temperature exceeds 32° F. Protect against direct sunlight.

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## STORAGE AND DISPOSAL (continued)

### Pesticide Disposal

Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

### Container Handling

**Nonrefillable Container. DO NOT** reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Triple rinse containers small enough to shake (capacity ≤ 5 gallons) 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.

**Triple rinse containers too large to shake (capacity > 5 gallons) 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 mix tank and continue to drain for 10 seconds after 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.

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## STORAGE AND DISPOSAL *(continued)*

### Container Handling *(continued)*

**Refillable Container.** Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

**Triple rinse as follows:** 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% 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.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

## In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

### Steps to take if material is released or spilled:

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

## Use Sites

**Finale® XL F-VM herbicide** may be applied for control of emerged weeds to the following use sites, see the **Specific Use Site Instructions** section for details:

- Native grass areas
- Industrial landscaping
- Conifer and hardwood tree production areas, nurseries and plantations
- Vegetation management in noncropland areas

## Product Information

**Finale XL F-VM** is a broad-spectrum, postemergence herbicide that contains the active ingredient glufosinate-ammonium. **Finale XL F-VM** is a water-soluble concentrate for application as a foliar spray to control annual and perennial emerged broadleaves, grasses, and sedges. **Finale XL F-VM** also controls many terrestrial and riparian invasive and noxious weeds and controls or suppresses certain woody species (brush, trees, and vines) including conifers. **Finale XL F-VM** is nonselective and severely injures or kills green vegetation contacted by the spray.

### Mode of Action

Glufosinate-ammonium, the active ingredient in **Finale XL F-VM**, is a **Group 10** herbicide and a potent inhibitor of glutamine synthetase.

### Herbicide Resistance Management

Any weed population may contain or develop plants naturally resistant to this product. Weed species with resistant biotypes may eventually dominate the population if this herbicide is used repeatedly in the same area or in successive years as the primary method of control for the targeted species. Appropriate resistance-management strategies must be followed.

To delay herbicide resistance consider:

- Avoiding the consecutive use of **Finale XL F-VM**, or other glufosinate-containing products, on the same weed species over time.
- Using tank mixes 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.
- Basing herbicide use on a comprehensive Integrated Pest Management (IPM) program including cultural and mechanical weed control methods.
- Monitoring treated weed populations for loss of field efficacy and control of escapes with effective alternative herbicides or mechanical methods.
- Identify weeds present in the area through scouting and area history and understand their biology. The weed control program needs to consider all of the weeds present.

- Scout areas prior to application to identify the weeds present and their growth stage to determine if the intended application will be effective.
- Scout areas after application to verify the treatment was effective.
- Suspected herbicide resistant weeds may be identified by the following indicators:
  1. Failure to control a species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  2. A spreading patch of noncontrolled plants of a particular species; and
  3. Surviving plants mixed with controlled individuals of the same species
- If resistance is suspected, treat escapes with a herbicide with a different MOA and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM guidance for certain areas or specific weeds.
- Report any incidence of nonperformance of this product against a particular weed species or suspected weed resistance to your local extension specialist, certified crop advisor, BASF representative, or your **Finale® XL F-VM herbicide** supplier.

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## Application Instructions

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- Apply **Finale XL F-VM** to foliage of emerged weeds and woody (brush) species.
- Apply **Finale XL F-VM** in a single application or sequential applications.
- For best results, apply **Finale XL F-VM** under warm temperatures, high humidity, and bright sunlight.
- Weed control may be reduced when application is made when heavy dew, fog, and mist/rain are present, or to weeds under stress due to environmental conditions including drought, cool temperatures (below 50°F), or extended periods of cloudiness.
- Apply a higher rate of **Finale XL F-VM** for plant sizes listed (see **Use Rates** table) when vegetation cover is dense or when weeds are growing under stressed conditions or cool temperatures (below 50°F).
- **Finale XL F-VM** is rainfast between 30 minutes and 4 hours after application depending on weed species, application rate, and environmental conditions.
- Under active growing conditions, symptoms of **Finale XL F-VM** application on treated plant material occur within 2 to 4 days after application.
- Regrowth may occur under certain conditions, including: weed growth stage at application, using less than the specified label rate, or environmental conditions.
- Plants may be safely transplanted into **Finale XL F-VM** treated areas after spray has dried.
- **Finale XL F-VM** may be applied by air or ground.

## Application Methods and Equipment

Use and configure application equipment for spray volume, accurate and uniform distribution of spray droplets over the treated area, and to avoid spray drift to nontarget areas. Maintain continuous agitation during spraying with mechanical or bypass agitation. Avoid overlaps that will increase rates above use rates specified in this label.

For best results, apply **Finale XL F-VM** in spray volumes that ensure uniform and thorough coverage of target vegetation.

Thoroughly clean sprayer after each use.

## Ground Application

- **Broadcast, Banded or Boom Spray.** Apply **Finale XL F-VM** at a minimum of 15 gallons of water per acre with spray pressure no more than is required for thorough target plant coverage.
- **Spot or Directed Spray.** Apply **Finale XL F-VM** with backpack, pump, or hydraulic sprayer to weeds or other undesirable foliage on a spray-to-wet basis. Ensure uniform and thorough coverage, but avoid applying beyond runoff.
- **Trimming and Edging.** When spraying **Finale XL F-VM** adjacent to desirable plants, use a shield made of cardboard, plywood, or sheet metal to help prevent spray from contacting foliage of desirable plants.
- **Side Trimming.** Direct the **Finale XL F-VM** spray solution to thoroughly cover (spray-to-wet) only the portion of the plant to be controlled.
- **Broadcast Spray for Brush Control.** Apply **Finale XL F-VM** with ground equipment at spray volume depending on height and density of the brush (see following paragraphs).
  - Low volume brush application:** Apply 20 to 50 gallons per acre when brush height is less than 6 feet and brush cover is less than 60% of the area.
  - High volume brush application:** Apply 50 to 100 gallons per acre when spraying medium-to-high density vegetation.
- **Individual Plant Treatments (IPT).** Apply **Finale XL F-VM** utilizing a selective foliar application method that targets individual plants (e.g., herbaceous or woody weed species). The application spray volume needs to be adjusted to account for the height and density of target vegetation to ensure thorough and uniform coverage of the target plant. Higher spray volumes may be necessary for taller/denser vegetation. Make IPT using backpack or hydraulic handgun equipment. Selectively wet all foliage on the target plant, starting at top of plant and covering all sides, but **DO NOT** drench target vegetation causing spray solution to run off. For best results, make IPT with an additive (see the **Tank Mixing Other Products and Additives** section for details).

## Aerial Application

- **Broadcast Spray.** Apply **Finale® XL F-VM herbicide** at a minimum of 15 gallons of water per acre. The spray volume per acre is determined by the equipment to ensure thorough spray coverage of target vegetation.
- **Helicopter Application Only.** Apply **Finale XL F-VM** at a minimum of 15 gallons of water per acre. The spray volume per acre is determined by the height and density of the target vegetation and equipment used. A drift control device or drift control system may be used when applying to areas near desirable (susceptible) plants.

### Mandatory Spray Drift Mitigation

#### 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.
- The spray boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
- Applicators are required to select nozzles that deliver a medium to coarse spray droplet size (ASABE S572.1).
- Applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- **DO NOT** apply when wind speed exceeds 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 4 feet above the ground or vegetative canopy, unless necessitated by application equipment.
- Applicators are required to select nozzles that deliver a medium to coarse spray droplet size (ASABE S572.1).
- **DO NOT** apply when wind speed exceeds 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

## Spray Drift Advisory

The applicator is responsible for avoiding off-site spray drift. Be aware of nearby nontarget 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 application is made improperly or under unfavorable environmental conditions.

## Controlling Droplet Size - Ground Boom

**Volume.** Increasing the spray volume so 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 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, orient nozzles parallel with the airflow in flight.

## Boom Height - Ground Boom

Use the lowest boom height compatible with the spray nozzles that will provide thorough and uniform coverage. The boom must remain level with the vegetation canopy and have minimal bounce.

## Release Height - Aircraft

Higher release heights increase the potential for spray drift.

## Temperature and Humidity

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

## Temperature Inversion

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 application during temperature inversions.

## Wind

Drift potential generally increases with wind speed. Avoid applications during gusty wind conditions. Applicators must be familiar with local wind patterns and terrain that could affect spray drift.

## Shielded Sprayers

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

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## Use Restrictions for All Labeled Uses

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- Grazing of vegetation treated with **Finale XL F-VM** is prohibited for one year after treatment.
- **DO NOT** apply directly or allow drift to contact desirable green tissue, or green, thin, or uncalloused bark of desirable vegetation.
- **DO NOT** apply this product through any type of irrigation system.

Use Site	Application Method	Maximum Single Application Rate	Maximum Annual Application Rate	Maximum Number of Application Per Year	Minimum Retreatment Interval (days)
Native Grass Areas; Industrial Landscaping; Conifer and Hardwood Tree Production Areas, Nurseries, and Plantations; Vegetation Control and Management in Noncropland Areas	Broadcast	82 fl ozs/A (1.5 lbs ai/A)	246 fl ozs/A (4.5 lbs ai/A)	3*	5
	Spot	3.2 fl ozs per gallon of spray (0.058 lb ai)			

\*When using the maximum single application rate (for spot treatments, **DO NOT** make more than 3 spot applications (same spot of < 1000 sq ft) per year).

## Tank Mixing Other Products and Additives

It is the pesticide user's responsibility to ensure that all products in the mixtures are registered for the intended use. Read and follow the applicable restrictions and precautions 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.

**Finale<sup>®</sup> XL F-VM herbicide** may be tank mixed or applied sequentially with other herbicide products registered for use in any use site found in this label. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for the intended use. Read and follow the specific tank mixing instructions on this label and respective product labels.

**Finale XL F-VM** may be tank mixed with one or more pre-emergence herbicide(s) for residual control of emerging underground reproductive plant parts or weed seeds, as well as vegetative growth from previously treated plants.

## Additives

Addition of nonionic antifoaming agent may reduce foaming, especially when using soft water.

Spray drift control additives may be used; read and follow all directions and precautions as specified on the drift control additive label.

Ammonium sulfate (AMS), methylated seed oil (MSO), or non-ionic surfactant (NIS) may be added for foliar applications.

For optimum burndown activity with **Finale XL F-VM** and to achieve consistent weed control in postemergence use patterns, an adjuvant system may be used that includes any of the following:

Additive/Adjuvant	Rate
AMS (spray grade)	2 to 4 lbs/A
plus one of the following	
MSO	1% volume/volume (v/v)
or	
NIS	0.25% v/v

## Compatibility Test for Tank Mixing Other Products and Additives

Before tank mixing components, always perform a compatibility jar test.

- In a clear glass jar, add components in the order listed.
- Add the appropriate amount of herbicide in the following order: (a) dry flowable, (b) wettable powder, (c) aqueous suspensions, (d) flowables, (e) liquids, and (f) solutions and emulsifiable or liquid concentrates. Shake or gently stir jar after each addition to thoroughly mix.
- After all components have been added, cap jar, tighten lid, and invert ten cycles to mix.
- Let solution in jar stand for 15 minutes.
- Evaluate** the solution for uniformity and stability. Look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. If the tank mix partners are not compatible, **DO NOT** use the mixture in any spray solution that could clog spray nozzles.

## Mixing Order

Make sure each component is thoroughly mixed and suspended before adding tank mix partners. Maintain constant agitation during mixing and application until spraying is completed.

- Start with calibrated and clean equipment.
- Fill the spray tank half full with water.
- Start agitation.
- If mixing with a flowable/wettable powder tank mix partner prepare a slurry of the appropriate amount of the product in a small amount of water. Add the slurry to the spray tank.
- Add ammonium sulfate (AMS) to the spray tank if needed.
- If mixing with a liquid tank mix partner, add the liquid mix partner next.
- Complete filling the spray tank with water **before adding Finale XL F-VM, because foaming may occur.**
- Add **Finale XL F-VM** when tank is full and continue agitation.
- If foaming occurs, use a silicone-based **antifoaming agent.**

If the spray mixture is allowed to settle for any period of time, thorough agitation is required to resuspend the mixture before spraying is resumed. Maintain constant agitation while spraying.

### Use Rates

Weed Size and Growth Stage	Broadcast Rate of Finale® XL F-VM herbicide (fl ozs/A)	Spot Spray Rate of Finale XL F-VM (% solution)
Weeds < 3 inches in diameter or height	27 to 41	0.4 to 0.6
Weeds < 6 inches in diameter or height, pre-tiller grasses	41 to 55	0.6 to 1.0
Weeds ≥ 6 inches in diameter or height, tillered grasses	55 to 82	1.0 to 1.25
Weeds > 8 inches in diameter or height	82	1.25
Brush	27 to 82	0.4 to 1.25
Volunteer conifer	55	1.0

Rate of Finale XL F-VM (fl ozs/A)	Glufosinate Rate Equivalency (lbs ai/A)
27	0.5
41	0.75
55	1.0
82	1.5
246	4.5

**Spot Spray Dilution.** Amount of **Finale XL F-VM** added to water to make 1 to 100 gallons of spot spray solution at dosages of 0.4% to 2.5% solution.

Desired % Solution (v/v)	Volume of Spot Spray Solution				
	1 gallon	10 gallons	25 gallons	50 gallons	100 gallons
Amount of Finale XL F-VM					
0.4%	0.5 fl oz	5 fl ozs	12.8 fl ozs	0.8 quart	0.4 gallon
0.6%	0.75 fl oz	7.7 fl ozs	19.2 fl ozs	1.2 quarts	0.6 gallon
0.8%	1.0 fl oz	10.25 fl ozs	25.6 fl ozs	1.6 quarts	0.8 gallon
1.0%	1.25 fl ozs	12.8 fl ozs	32 fl ozs	2 quarts	1 gallon
1.25%	1.6 fl ozs	16 fl ozs	40 fl ozs	2.5 quarts	1.25 gallons
2.5%*	3.2 fl ozs	32 fl ozs	80 fl ozs	5 quarts	2.5 gallons

\* Spot treatment rate for Individual Plant Treatment applications only.

### Weeds Controlled

For postemergence control of emerged weeds listed in the following tables, apply **Finale XL F-VM** at the rates for broadcast or spot applications based on weed size and growth stage.

#### Broadleaf Weeds Controlled

Common Name	Scientific Name
Bindweed	<i>Convolvulus</i> spp.
Buckwheat, wild	<i>Polygonum convolvulus</i>
Buffalobur	<i>Solanum rostratum</i>
Burdock, common	<i>Arctium minus</i>
Chickweed, common	<i>Stellaria media</i>
Clover, white	<i>Trifolium repens</i>
Cocklebur, common	<i>Xanthium strumarium</i>
Dandelion, common	<i>Taraxacum officinale</i>
Dock, curly	<i>Rumex crispus</i>
Dogbane, hemp	<i>Apocynum cannabinum</i>
Filaree, redstem	<i>Erodium cicutarium</i>
Fleabane	<i>Erigeron</i> spp.
Goldenrod	<i>Solidago</i> spp.
Gromwell, field or corn**	<i>Buglossoides arvensis</i>
Henbit	<i>Lamium amplexicaule</i>
Horsetail, field	<i>Equisetum arvensis</i>
Jimsonweed	<i>Datura stramonium</i>
Kochia	<i>Kochia scoparia</i>
Lambsquarters, common	<i>Chenopodium</i> spp.
Lettuce, prickly	<i>Lactuca serriola</i>
Mallow, little (cheeseweed)	<i>Malva parviflora</i>

(continued)



**Broadleaf Weeds Controlled** *(continued)*

Common Name	Scientific Name
Marestail (horseweed)	<i>Conyza canadensis</i>
Mugwort	<i>Artemisia vulgaris</i>
Mullein	<i>Verbascum</i> spp.
Mustard, tansy (flixweed)**	<i>Descurainia sophia</i>
Mustard, wild	<i>Sinapis arvensis</i>
Nettle	<i>Urtica</i> spp.
Nightshade	<i>Solanum</i> spp.
Onion, wild	<i>Allium canadense</i>
Pennycress, field	<i>Thlaspi arvense</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Plantain	<i>Plantago</i> spp.
Pokeweed, common	<i>Phytolacca americana</i>
Purslane, common	<i>Portulaca oleracea</i>
Ragweed	<i>Ambrosia</i> spp.
Rocket, London	<i>Sisymbrium irio</i>
Rocket, yellow	<i>Barbarea vulgaris</i>
Rose, wild**	<i>Rosa</i> spp.
Shepherd's purse	<i>Capsella bursa-pastoris</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Sowthistle, annual	<i>Sonchus oleraceus</i>
Spurge, leafy	<i>Euphorbia esula</i>
Thistle, Canada	<i>Cirsium arvense</i>
Thistle, musk	<i>Carduus nutans</i>
Thistle, Russian	<i>Salsola iberica</i>
Turnip, wild (wild radish)	<i>Raphanus raphanistrum</i>
Velvetleaf	<i>Abutilon theophrasti</i>
Vervain	<i>Verbena</i> spp.
Virginia copperleaf	<i>Acalypha virginica</i>
White heath aster	<i>Erigeron</i> spp.
Woodsorrel	<i>Oxalis</i> spp.

**Grass Weeds and Sedges Controlled**

Common Name	Scientific Name
Bahiagrass	<i>Paspalum notatum</i>
Barley	<i>Hordeum</i> spp.
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bermudagrass**	<i>Cynodon dactylon</i>
Bluegrass, annual	<i>Poa annua</i>
Bluegrass, Kentucky	<i>Poa pratensis</i>
Brome, downy	<i>Bromus tectorum</i>
Brome, smooth	<i>Bromus inermis</i>
Carpetgrass	<i>Axonopus affinis</i>
Crabgrass	<i>Digitaria</i> spp.

*(continued)*
**Grass Weeds and Sedges Controlled** *(continued)*

Common Name	Scientific Name
Cupgrass, woolly	<i>Eriochloa acuminata</i>
Dallisgrass	<i>Paspalum dilatatum</i>
Fescue	<i>Festuca</i> spp.
Foxtail, giant	<i>Setaria faberi</i>
Foxtail, green	<i>Setaria viridis</i>
Foxtail, yellow	<i>Setaria pumila</i>
Goosegrass	<i>Eleusine indica</i>
Guineagrass	<i>Urochloa maxima</i>
Johnsongrass (rhizome)*	<i>Sorghum halepense</i>
Lovegrass	<i>Eragrostis</i> spp.
Nutsedge	<i>Cyperus</i> spp.
Panicum, fall	<i>Panicum dichotomiflorum</i>
Para grass	<i>Urochloa mutica</i>
Quackgrass	<i>Elymus repens</i>
Ryegrass	<i>Lolium</i> spp.
Sandbur	<i>Cenchrus</i> spp.
Shattercane	<i>Sorghum bicolor</i> spp. <i>arundinaceum</i>
Signalgrass*	<i>Urochloa</i> spp.
Sprangletop	<i>Leptochloa</i> spp.
Stinkgrass	<i>Eragrostis cilianensis</i>
Torpedograss	<i>Panicum repens</i>
Vaseygrass	<i>Paspalum urvillei</i>
Wheat, volunteer	<i>Triticum aestivum</i>
Wild oat	<i>Avena fatua</i>
Windgrass, common	<i>Apera spica-venti</i>

\* Minimum rate in California for control is broadcast 41 fl ozs/A or spot 0.6% solution of **Finale® XL F-VM herbicide**.

\*\* Minimum rate in California for control is broadcast 55 fl ozs/A or spot 1.0% solution of **Finale XL F-VM** for weeds < 6 inches and broadcast 82 fl ozs/A or spot 1.25% solution of **Finale XL F-VM** for weeds ≥ 6 inches.

**Brush<sup>1,2</sup> Species Suppressed or Controlled**

Common Name	Scientific Name
Blackberry	<i>Rubus</i> spp.
Cedar, western red <sup>2</sup>	<i>Thuja plicata</i>
Deerbrush	<i>Ceanothus integerrimus</i>
Douglas fir <sup>2</sup>	<i>Abies</i> spp.
Elm <sup>2</sup>	<i>Ulmus</i> spp.
Gallberry	<i>Ilex</i> spp.
Hazel	<i>Corylus</i> spp.
Honeysuckle	<i>Lonicera</i> spp.

*(continued)*

## Brush<sup>1,2</sup> Species Suppressed or Controlled *(continued)*

Common Name	Scientific Name
Huckleberry	<i>Gaylussacia</i> spp.; <i>Vaccinium</i> spp.
Maple	<i>Acer</i> spp.
Multiflora rose	<i>Rosa multiflora</i>
Oak <sup>2</sup>	<i>Quercus</i> spp.
Pine <sup>2</sup>	<i>Pinus</i> spp.
Poison ivy	<i>Toxicodendron radicans</i>
Poison oak	<i>Toxicodendron toxicarium</i>
Roundleaf greenbrier	<i>Smilax rotundifolia</i>
Salmonberry	<i>Rubus spectabilis</i>
Sumac	<i>Rhus typhina</i>
Sweetgum	<i>Liquidambar styraciflua</i>
Thimbleberry	<i>Rubus parviflorus</i>
Trumpet creeper	<i>Campsis radicans</i>
Vine maple	<i>Acer circinatum</i>

<sup>1</sup> Not for use on brush in California.

<sup>2</sup> **Apply higher rates of Finale® XL F-VM herbicide:**

- for hard-to-control woody plants including elm, certain oaks, or when plant leaf surfaces have hardened off; or tank mix **Finale XL F-VM** with other herbicides registered for control of these woody plants.
- when conditions are not optimum for thorough spray coverage, including when weed growth is heavy or dense.

<sup>2</sup> **Apply lower rates of Finale XL F-VM when:**

- target species is conifer.
- vegetation growth conditions allow for uniform spray coverage.

### Specific Use Site Instructions

#### Native Grass Areas

**Finale XL F-VM** may be used to establish and maintain native grass and natural areas including wildlife management areas, wildlife openings, wildlife food plots, wildlife habitats, habitat restoration areas, and conservation reserve program (CRP) areas.

Apply **Finale XL F-VM** only as a spot or IPT application for selective weed control in native grass areas and unimproved turf.

## Industrial Landscaping

**Finale XL F-VM** may be used for trimming (including side) and edging industrial landscapes and landscaped highway medians, interchanges, embankments, and buffer areas where perennial plants are established. When spraying in areas adjacent to desirable plants, use a shield made of cardboard, plywood, or sheet metal to help prevent spray from contacting foliage of desirable plants.

**Finale XL F-VM** may be applied around nonbearing fruit and nut trees, vines, and bushberries grown in industrial areas. Immature and/or inedible fruits may appear and are not intended for harvest or consumption.

Apply **Finale XL F-VM** postemergence-directed as a broadcast, banded, or spot spray application around established trees and/or woody shrubs while targeting emerged weeds.

**DO NOT** make an over-the-top application to any desirable landscape vegetation or severe injury will occur.

**DO NOT** apply directly or allow spray drift to contact desirable green tissue or green, thin, or uncalloused bark of desirable vegetation or severe injury will occur.

## Conifer and Hardwood Tree Production Areas, Nurseries, and Plantations

Apply **Finale XL F-VM** to control volunteer conifers and other undesirable plants during site preparation operations before planting and establishment of conifer and hardwood tree production areas, conifer and hardwood nurseries, and conifer and hardwood plantations; or as an understory application below the tree canopy of established conifers and hardwoods.

**DO NOT** apply **Finale XL F-VM** as an over-the-top broadcast spray to desirable tree plantings or severe injury will occur.

**DO NOT** apply directly to or allow spray drift to contact desirable green tissue or green, thin, or uncalloused bark of desirable trees or severe injury will occur.

**Site Preparation Application.** Apply **Finale XL F-VM** as a broadcast application during preplant site preparation for control of volunteer conifers and other undesirable plants, and for enhanced brownout with other site-preparation tank mixes. Seedling trees may be planted into the treated area after the restricted-entry interval (REI) of 12 hours.

**Volunteer Conifer Control.** For best control of volunteer conifer, apply **Finale XL F-VM** as a foliar application in the spring, summer, and early fall when volunteer conifer seedlings are actively growing. Mid-to-late fall applications to volunteer conifer that are slowing their growth may not provide consistent control.

**Understory Application in Established Plantations.** Apply **Finale XL F-VM** postemergence-directed as a broadcast, banded, or spot spray application below the canopy of established conifer or hardwood plantings for

control of targeted emerged weeds and/or other undesirable vegetation.

## Vegetation Control and Management in Noncropland Areas

Apply **Finale® XL F-VM herbicide** for nonselective weed and/or brush control in and/or around to the following uncultivated noncropland areas where vegetation control and/or management is needed to maintain the site(s):

Airports, airfields, terminals  
Alleys  
Athletic fields  
Bareground areas  
Barns  
Barrier strips  
Beaches (not for use in California)  
Campgrounds  
Canals (dry)  
Cemeteries  
Commercial sites including retail centers, strip malls, shopping malls, office buildings, plants  
Construction sites  
Ditchbanks  
Ditches (dry)  
Drive-in theaters  
Educational facilities  
Farmstead and ranch areas (barnyards, buildings and out-buildings, driveways, lanes, facilities, farmyards, foundations, machinery or implement yards, windbreaks, shelterbelts, uncropped areas, fallow areas, runoff areas)  
Fences, fencelines, boarder fencing, fence rows  
Fire breaks, fire rehabilitation areas  
Fuel storage areas  
Government and military installations including bases, airports, ranges (all types)  
Grain facilities  
Gravel yards, pits  
Hardscapes  
Industrial sites, plants, and areas  
Landfill sites  
Livestock facilities  
Lumberyards, storage yards  
Manufacturing plants/sites  
Mines (all types) and mine reclamation areas  
Municipal sites  
Natural areas including parks (national, state, county, city)  
Nuclear plant sites  
Office buildings  
Parking lots/areas/lanes  
Pathways  
Paved areas  
Pipelines  
Power plants/stations (including nuclear plant sites)  
Prairies  
Prisons and correctional facilities  
Private and public managed lands including Bureau of Land Management grounds, national parks and forests, public managed grounds and areas  
Pumping stations or installations

Railroads, rail yards, rail crossings, rail lines of sight, rail rights-of-way  
Recreational areas and open spaces including campgrounds, parks, restoration areas, RV camping/parking areas, hunting grounds, sports areas, off-road transportation paths/trails, natural areas, tennis courts  
Refineries  
Resorts  
Roadways/roadsides/highways including interstate highways (federal, state, city and county), expressways, tollways, access roads, entrance/exit ramps, aprons, medians, guardrails, rest areas, rights-of-way  
Roof-top plantings  
Schools  
Sewage disposal areas  
Sidewalks  
Sod farms  
Solar farms  
Sports and motorsports complexes  
Storage shed sites  
Tank farms (chemical, industrial, petroleum, water)  
Trails and trailheads, hiking paths  
Transected grazed areas (only when using IPT as described following)  
Transitional areas between upland and lowland sites (when dry)  
Utility buildings, plant sites, substations  
Utility rights-of-way (electrical, pipeline, telephone)  
Vacant lots  
Walkways  
Warehouses  
Waste disposal sites, wastelands  
Water towers  
Wayside structures  
Wetlands (seasonally dry with intermittingly flooded low lying areas including flood plains, deltas, marshes, swamps, bogs but not applied to standing water)  
Wildlife areas (management, opening, habitats)  
Wind farms, wind turbine stations

Apply **Finale XL F-VM** as a broadcast or spot spray application for control of herbaceous and woody weed species. Make foliar applications in the spring, summer, and early fall when undesirable vegetation is actively growing. Mid-to-late fall applications to vegetation that is slowing growth may not provide consistent control.

**Individual Plant Treatments (IPT) in Transected Grazed Areas.** Apply **Finale XL F-VM** only as an IPT for vegetation management in noncropland sites that transect areas grazed by livestock. Target only individual undesirable weedy herbaceous and woody plant (brush) species. Apply **Finale XL F-VM** at rates of 0.8% to 2.5% volume/volume. **Finale XL F-VM** can be tank-mixed with other herbicides registered for control of the target weed. **DO NOT** apply as a broadcast spray on sites that transect grazed areas. There are no grazing restrictions where **Finale XL F-VM** is applied as an IPT to treat undesirable plants.

## Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.**

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT.**

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.**

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

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BASF Corporation  
26 Davis Drive  
Research Triangle Park, NC 27709

  
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