

JAN 21 1999

Mr. Victor A. Dorr  
AgrEvo USA Company  
Little Falls Centre One  
2711 Centerville Road  
Wilmington, DE 19808

Dear Mr. Dorr:

Subject: Finale® Herbicide  
EPA Registration No. 45639-187  
Application and Letter Dated November 18, 1998,  
Request To Amend Registration with Revisions of Labeling:  
o Revised "First Aid Statement" for "if Swallowed"  
o Precautions for Contact with Tree Bark  
o Revised Rate Structure To Be Consistent with Finale  
VM Herbicide Label  
o New Use Notes Added to Page 9 To Clairfy Rate Range  
and Ammonium Sulfate Tank Mix  
o Woody Species Deleted from Weed List and Added to  
Woody Species List  
o Several Other Minor Format, Editorial and Text Revisions

The proposed labeling reflecting the subject amendments has been reviewed and found to be acceptable for registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as amended, provided that you:

1. Add the following statement following the directions for the compatibility test on page 6: "If the compatibility test shows signs of incompatibility, do not tank mix the product tested with Finale Herbicide".
2. On page 10 add the word "selecting" prior to the words "recommended rates", in the paragraph on "Dormant Bermudagrass".
3. The claim for "big maple" is unacceptable, for Acer spp. Revise the list of Woody Species claimed on page 9 by listing the latin names to reflect correctly the the name of the woody plants listed.
4. Submit one (1) copy of the final printed label prior to releasing this pesticide product for shipment under the subject label.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA, section

CONCURRENCES

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6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the proposed label is enclosed for your records.

Sincerely yours,

Joanne I. Miller  
Product Manager (23)  
Herbicide Branch  
Registration Division (7505C)

Enclosure

Eugene Wilson:Disketté 99ABC: 01-21-99

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# FINALE<sup>®</sup> HERBICIDE

## FOR NONSELECTIVE WEED CONTROL OF EMERGED WEEDS IN NON-CROP AREAS

<b>ACTIVE INGREDIENT:</b>	
Glufosinate-ammonium <sup>†</sup> (CAS Number 77182-82-2) .....	11.33%*
<b>OTHER INGREDIENTS</b> .....	<u>88.67%</u>
	<b>TOTAL 100.00%</b>

\*Equivalent to 1.00 pound of active ingredient per U.S. gallon.

† Protected by U.S. Patent No 4,400,196

**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.)

EPA Registration Number 45639-187

EPA Establishment Number 45639-MI-001

Net Contents: [Various Sizes]

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated**

**JAN 21 1999**

**Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.**

**45639-187**



**AgrEvo USA Company**

**Little Falls Centre One  
2711 Centerville Road  
Wilmington, DE 19808**

## FIRST AID STATEMENT

- If Swallowed:** Rinse mouth thoroughly with plenty of water. Do **NOT** induce vomiting. Get medical attention immediately.
- If in Eyes:** Flush with plenty of water. Get medical attention if irritation persists.
- If on Skin:** Remove contaminated clothing. Wash skin immediately with plenty of soap and water. Get medical attention.
- If Inhaled:** Remove individual to fresh air. Get medical attention if breathing difficulty develops.

### NOTE TO PHYSICIAN

If this product is ingested, endotracheal intubation and gastric lavage should be performed as soon as possible, followed by charcoal and sodium sulfate administration. **Additionally, call 1-800-471-0660 immediately for further information.**

**In case of medical, environmental, or transportation emergencies or inquiries, call 1-800-471-0660 (24 hours/day).**

For product inquiry information, call toll free: 1-800-331-2867 or visit the AgrEvo Green Industry web site at [www.agrevo-green.com](http://www.agrevo-green.com)

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### WARNING

Causes substantial but temporary eye injury. Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with skin, eyes, or clothing. Avoid breathing vapor or spray mist.

#### Personal Protective Equipment (PPE)

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

#### Applicators and other handlers must wear:

Long-sleeved shirt and long pants; chemical-resistant gloves such as barrier laminate, butyl rubber  $\geq 14$  mils, nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, polyvinyl chloride (PVC)  $\geq 14$  mils, or Viton<sup>®</sup>  $\geq 14$  mils; shoes plus socks; protective eyewear.

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, use detergent and hot water. Keep and wash PPE separately from other laundry.

### USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing 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 clean equipment or dispose of equipment washwaters in a manner that will contaminate water resources or arable land. Glufosinate-ammonium and its degradates have those properties normally associated with pesticides that have been detected in groundwater. Use of this product in areas with coarse soils and high water tables may result in groundwater contamination.

### STORAGE AND DISPOSAL

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

Do not use or store near heat or open flame.

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

**CONTAINER DISPOSAL:** Empty containers should be triple rinsed (or equivalent). Then offer for recycling or reconditioning, 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.

## GENERAL INFORMATION

Finale<sup>®</sup> Herbicide is a nonselective water-soluble herbicide for application as a foliar spray for the control of a broad spectrum of emerged annual and perennial grass and broadleaf weeds. Finale Herbicide will also control certain woody species. Plants that have not yet emerged at the time of application will not be controlled. **THOROUGH SPRAY COVERAGE IS IMPORTANT.** Visual effects and control from application of Finale Herbicide occur within 2 to 4 days after application under good growing conditions.

This product is nonselective and will injure or kill all green vegetation contacted by the spray. Avoid all contact with foliage or green tissue of desirable vegetation. Avoid direct spray contact with green, thin, or uncalloused bark of desirable vegetation or plant injury may result. If desirable vegetation is contacted, rinse the sprayed portion with water immediately.

Finale Herbicide works best when weeds are actively growing. Weed control may be reduced when applications are made to weeds under stress due to drought or cool temperatures. Weeds under stress or in dense populations will require application at the highest rate recommended. Refer to the *How to Apply* section of this label.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not use this product until you have read the entire label. 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.

*In the State of New York only: Not for use in Nassau and Suffolk Counties.*

### 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, such as plants, soil, or water, is: coveralls; chemical-resistant gloves such as barrier laminate, butyl rubber  $\geq 14$  mils, nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, polyvinyl chloride (PVC)  $\geq 14$  mils, or Viton  $\geq 14$  mils; shoes plus socks; protective eyewear.

### 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 application for trimming and edging, industrial, recreational and public areas, and farmsteads are not within the scope of the WPS.

### NONCROP USES

When applied as recommended in this label, Finale Herbicide controls annual and perennial weeds. Refer to the *How to Apply* section of this labeling for recommended rates and a list of weeds controlled. Applications may be made on a broadcast, banded or spot treatment basis depending on the situation. Avoid direct spray or drift to desirable vegetation. Regrowth may occur due to the weed stage of growth at application, low use rate, or environmental conditions. Repeat treatments may be necessary to control plants generating from underground parts or seed.

### WHEN TO APPLY

Finale Herbicide is a foliar-active material. Best results are obtained when weeds are actively growing. Weed control may be reduced when applications are made to weeds under stress due to drought or cool temperatures. Weeds under stress or in dense populations will require application of the highest rate recommended. Refer to the *How to Apply* section of this label.

Finale Herbicide should be applied at the rate recommended in the *How to Apply* section of this label. Repeat applications of Finale Herbicide or tank mixes of Finale Herbicide plus one or more appropriate residual herbicide(s) listed on this label will be needed to control weeds emerging from underground parts or seeds.

### HOW TO MIX

Finale Herbicide must be mixed with water to make a finished spray solution as follows:

1. Fill the spray tank with the required amount of water.
2. Add the proper amount of this product, then mix thoroughly.

### USE PRECAUTIONS

1. **DO NOT** apply this product through any type of irrigation system.
2. **DO NOT** apply directly to or allow drift to contact desirable green tissue or green, thin, or uncalloused bark of desirable vegetation.
3. Finale Herbicide is rainfast in a minimum of one-half hour and an average of 4 hours after application depending upon weed species, environmental conditions, and herbicide application rate.
4. **DO NOT** allow grazing of vegetation treated with this product.

## HOW TO APPLY

### Spot or Directed Applications

This product may be used as a spot- or directed spray-application using 1.5 to 4 fluid ounces per gallon of water. Mix 1.5 to 4 fluid ounces per gallon of water depending upon the weed and stage of growth as shown in the following sections. Spray undesirable vegetation foliage on a spray-to-wet basis. Do not apply beyond runoff. Ensure uniform and complete coverage. Use a coarse spray. Do not spray during windy conditions. Backpack, pump-up, and hydraulic sprayers may be used. Thoroughly clean the sprayer following use.

### Broadcast or Boom Applications

Apply 2 to 6 quarts per acre depending upon the weed and stage of growth as shown in the following sections. Use a minimum of 20 gallons of water per acre with a minimum of 30 psi spray pressure.

### Aerial Applications

Apply as a foliar treatment using a minimum of 5 gallons of water per acre to ensure thorough coverage. Do not apply when winds are gusty or under any conditions which favor drift on to desirable vegetation. Applications under conditions which cause drift of this product will result in damage to any vegetation contacted. Drift control additives may be used. If a drift control additive is used, observe and follow all directions and precautions as specified on the additive label.

### Tank Mix Recommendations for Noncrop Uses

Finale Herbicide is compatible in tank mixes with many other herbicides. Follow the more restrictive label limitations and use precautions for each product. No label dosage rates should be exceeded.

Tank mix applications of Finale Herbicide plus the following herbicides are recommended for broad spectrum postemergence and preemergence weed control.

Arsenal <sup>®</sup> Herbicide	Factor <sup>®</sup> Herbicide	Predict <sup>®</sup> Herbicide
Barricade <sup>®</sup> 65WG Herbicide	Gallery <sup>®</sup> 75 Dry Flowable Specialty Herbicide	Surflan A.S. <sup>®</sup> Specialty Herbicide
Endurance <sup>®</sup> Herbicide	Pendulum <sup>®</sup> WDG Herbicide	Vanquish <sup>®</sup>

Compatibility of Finale Herbicide and clay-based dry flowable herbicides should be determined in a jar test before tank mixing. A quart jar compatibility test should be conducted as follows:

1. Fill the jar three-quarters full with water
2. 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.
3. After adding all ingredients, let the mixture stand for 15 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar or other signs of incompatibility.



## Weeds Controlled by Finale Herbicide

For spot application:

Apply 1.5 to 3 fluid ounces per gallon of water.

For broadcast application:

Apply 3 quarts per acre when the weed height or diameter is less than 6 inches.

Apply 4 quarts per acre when the weed height or diameter is 6 inches or greater.

### **Broadleaf Weeds**

chickweed  
clover  
common cocklebur  
filaree  
jimsonweed  
kochia  
London rocket  
malva (little mallow)  
marestail  
purslane  
shepherdspurse  
smartweed

### **Grasses and Sedges**

barnyardgrass  
cupgrass  
fall panicum  
giant foxtail  
goosegrass  
green foxtail  
Johnsongrass (rhizome)  
lovegrass  
shattercane  
stinkgrass  
windgrass  
yellow foxtail

## Weeds Controlled by Finale Herbicide

For spot application:

Apply 3 to 4 fluid ounces per gallon of water.

For broadcast application:

Apply 4 quarts per acre when the weed height or diameter is less than 8 inches tall.

Apply 6 quarts per acre when the weed height or diameter is 8 inches or greater.

### Broadleaf Weeds

annual sowthistle  
bindweed  
buffalobur  
burdock  
Canada thistle  
curly dock  
dandelion  
dogbane (hemp)  
field gromwell  
fleabane  
goldenrod  
horsetail  
lambsquarters  
leafy spurge  
mugwort  
musk thistle  
nettle  
nightshade  
pennycress  
pigweed, red root  
plantain  
prickly lettuce  
ragweed  
Russian thistle  
tansy mustard  
velvetleaf  
vervain  
Virginia cooperleaf  
white heath aster  
wild buckwheat  
wild mustard  
wild onion  
wild rose  
wild turnip  
woodsorrel  
yellow rocket

### Grasses and Sedges

annual bluegrass  
bahiagrass  
barley  
Bermudagrass  
carpetgrass  
crabgrass  
dallisgrass  
downy brome  
fescue  
guineagrass  
Kentucky bluegrass  
nutsedge  
paragrass  
quackgrass  
ryegrass  
sandbur  
smooth brome  
torpedograss  
vaseygrass  
wheat  
wild oat

**Use Notes**

1. Use higher rates within the recommended rate range for plant sizes listed when vegetation cover is dense or when weeds are growing under stressed conditions such as drought or when average temperatures are below 50°F.
2. The addition of 8.5 to 17 pounds of ammonium sulfate (spray grade) per 100 gallons of water (1 to 2% by weight) or 2 to 4 pounds of ammonium sulfate per acre may improve the level of weed control.

**Use on Woody Species**

When applied as recommended, Finale Herbicide will provide control, partial control, or suppression of certain perennial woody weed species. Apply 2 to 6 quarts per acre. Use the high recommended rates per acre of this product when conditions are not optimum for spray penetration, such as when vegetation growth is heavy or dense. Lower recommended rates may be used when the target species is a conifer and when vegetation growth conditions allow for uniform spray coverage.

big maple	<i>Acer</i> spp.
blackberry	<i>Rubus</i> spp.
deer brush	<i>Ceanothus</i> spp.
Douglas fir	<i>Pseudotsuga mensiesii</i>
evergreen huckleberry	<i>Gaylussacia</i> spp.
gallberry	<i>Ilex</i> spp.
hazel	<i>Corylus</i> spp.
honeysuckle	<i>Lonicera</i> spp.
multiflora rose	<i>Rosa multiflora</i>
oak	<i>Quercus</i> spp.
pine	<i>Pinus</i> spp.
poison ivy	<i>Rhus toxicodendron</i>
poison oak	<i>Rhus radicans</i>
roundleaf greenbriar	<i>Smilax rotundifolia</i>
salmonberry	<i>Rubus spectabilis</i>
sweet gum	<i>Liquidambar styraciflua</i>
sumac	<i>Rhus</i> spp.
thimbleberry	<i>Rubus parviflorus</i>
trumpet creeper	<i>Campis radicans</i>
varnishleaf	<i>Ceanothus</i> spp.
vine maple	<i>Acer eircinatum</i>
Western red cedar	<i>Juniperus</i> spp.

**WHERE TO APPLY****Trimming and Edging**

Finale Herbicide may be used for trimming and edging landscape areas such as: around individual trees and shrubs, landscape beds, foundations, fences, driveways, paths, and parking areas; also on golf courses along cart paths, around sign and light posts, and around sand traps. Plants may be safely transplanted into treated areas. For control of weeds emerging from seed, the use of Finale Herbicide in a tank mix with preemergence herbicides is recommended. If spraying in areas adjacent to

desirable plants, use a shield made of cardboard, plywood, or sheet metal while spraying to help prevent spray from contacting foliage of desirable plants. Refer to the *How to Apply* section of this labeling for appropriate application rates to control specific weeds.

### **Industrial, Recreational and Public Areas**

When applied as a spot or directed spray application, this product controls annual and perennial weeds listed on this label in areas such as: airports, commercial plants, storage and lumber yards, highways, educational facilities, fence lines, ditch banks, dry ditches, schools, parking lots, tank farms, pumping stations, parks, utility rights-of-way, roadsides, railroads, other public areas and similar industrial and nonfood crop areas. Refer to the *How to Apply* section of this labeling for appropriate application rates to control specific weeds.

### **Dormant Bermudagrass**

Finale Herbicide may be used to control winter annual weeds in well established ornamental dormant hybrid or common bermudagrass. Apply **only** when the turf is fully dormant and prior to spring green-up or severe turfgrass injury or delayed green-up may occur. For best results, apply Finale Herbicide at a rate of 3 to 6 quarts per acre after most weeds have germinated and are in an early growth stage. Refer to the *Weeds Controlled by Finale Herbicide* section of this label for recommended rates. Applications of Finale Herbicide may also be used to suppress or control undesirable biennial or perennial weeds. Do not apply more than 6 quarts of Finale Herbicide per acre per year for this use. Avoid high volume and spot applications where spray volume exceeds 80 gallons per acre or injury or delayed green-up may occur.

### **Ornamentals and Christmas Trees**

When applied as recommend by this label, this product may be used for the control of undesirable vegetation in site preparation prior to planting, around and within shade and greenhouses, and as a directed spray around containers and field-grown established ornamentals and Christmas trees.

**DO NOT apply directly to or allow drift to contact desirable green tissue or green, thin, or uncalloused bark of desirable vegetation or injury may result. DO NOT apply Finale Herbicide as an over-the-top broadcast spray in ornamentals and shade or Christmas trees.**

**Directed spray application:** Finale Herbicide may be applied as a directed spray to control in-row weeds in field-grown woody plants. Refer to the *How to Apply* section of this labeling for appropriate application rate to control specific weeds. This product may also be used between and around containers and in site preparation for new planting.

**Site preparation application:** This product may be used for pre-plant site preparation for the control of annual and perennial weeds listed on this label, in ornamental and Christmas tree plantings. Ornamentals and Christmas trees may be planted into the treated area after the restricted entry interval (REI) of 12 hours has elapsed. Refer to the *How to Apply* section of this labeling for appropriate application rates to control specific weeds.

**Greenhouse and shade house applications:** Finale Herbicide may be used to control weeds in greenhouses and shadehouses. **Air circulation fans must be turned off during application. Apply Finale Herbicide as a directed spray, using large droplet, low pressure type nozzles. Avoid drift and direct contact with desirable vegetation. Do not use in greenhouses or shade houses containing edible crops.**

## **FARMSTEADS**

When applied as recommended, this product controls undesirable plant vegetation in noncrop areas around farmstead building foundations, shelter belts, along fences, and general nonselective farmstead weed control. Refer to the *How to Apply* section of this labeling for appropriate application rates to control specific weeds. Do not allow grazing of treated vegetation.

## **IMPORTANT: READ BEFORE USE**

By using this product, user or buyer accepts the following conditions, warranty, disclaimer of warranties and limitations of liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and should be followed carefully. However, because of extreme weather conditions and soil conditions, manner of use and other factors beyond AgrEvo USA Company's control, it is impossible for AgrEvo USA Company to eliminate all risks associated with the use of this product. As a result, crop injury or ineffectiveness is always possible. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of AgrEvo USA Company is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. AgrEvo USA Company disclaims any liability whatsoever for incidental or consequential damages, including, but not limited to, liability arising out of breach of contract, express or implied warranty (including warranties of merchantability and fitness for a particular purpose), tort, negligence, strict liability or otherwise.

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