


1812-435

03/15/2000

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 <p>U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Registration Division (7515C) 401 "M" St., S.W. Washington, D.C. 20460</p> <p>NOTICE OF PESTICIDE: <u> X </u> Registration <u> </u> Reregistration</p> <p>(under FIFRA, as amended)</p>	EPA Reg. Number: 1812-435	Date of Issuance: MAR 15 2000
	Term of Issuance: Conditional	
	Name of Pesticide Product: Fluridone SC	
Name and Address of Registrant (include ZIP Code): Griffin L.L.C. P.O. Box 1847 Valdosta, GA 31603-1847		
<p>Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.</p> <p>On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.</p> <p>Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.</p> <p>This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:</p> <ol style="list-style-type: none"> 1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4. 2. Make the following label changes before you release the product for shipment: <ol style="list-style-type: none"> a. Revise the EPA Registration Number to read, "EPA Reg. No. 1812-435". b. Add a dermal statement in the Statement of Practical Treatment to read "IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists." 		
Signature of Approving Official:		Date: MAR 15 2000

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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3. Submit an acceptable Corrosion Characteristics study (830.6320) for the technical fluridone material (i.e., the source of the active ingredient) within two (2) years of the date of this Notice. We acknowledge that data corresponding to this requirement was previously submitted with the original application. However, the study that was submitted is not sufficient to make any evaluation. Therefore, a one-year Corrosion Characteristics study for the technical fluridone material must be performed and submitted.

4. Submit one copy of the revised final printed label for the record before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

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

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

Enclosure

DK:305-7546:HB/PM23

CONCURRENCES

SYMBOL	7505C							
SURNAME	D. KENNY							
DATE	3/15/2000							

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12/03/99

FLURIDONE SC

AQUATIC HERBICIDE

gx649s99a
ACCEPTED
with COMMENTS
In EPA Letter Dated

MAR 15 2000

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

1812-435

Active Ingredient

Fluridone:

1-methyl-3-phenyl-5-[3-(trifluoromethyl)phenyl]-4(1H)-pyridinone. . . . 41.7%

Inert Ingredients 58.3%

Total 100.0%

Contains 4 pounds of fluridone per gallon.

A herbicide for management of aquatic vegetation in fresh water ponds, lakes,
reservoirs, drainage canals and irrigation canals.

KEEP OUT OF REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Flush eyes with plenty of water. Call a physician if irritation persists.

IF SWALLOWED: Call a physician or Poison Control Center. Drink one or two glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not induce vomiting.

IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

For medical emergencies involving this product, call toll free 1-888-324-7598.

See Label for Additional Precautions and Directions for Use.

Griffin L.L.C.
Valdosta, GA 31601

EPA Reg. No. 1812-
EPA Est. No.

Net Contents _____

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION**

Harmful if swallowed, absorbed through skin or inhaled. Causes moderate eye irritation. Avoid breathing spray mist. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

ENVIRONMENTAL HAZARDS

Follow use directions carefully so as to minimize adverse effects on nontarget organisms. In order to avoid impact on threatened or endangered aquatic plant or animal species, users must consult their State Fish and Game Agency or the U.S. Fish and Wildlife Service before making applications.

Do not contaminate water when disposing of equipment washwaters. Trees and shrubs growing in water treated with Fluridone SC may occasionally develop chlorosis. Do not apply in tidewater/brackish water.

Lowest rates should be used in shallow areas where the water depth is considerably less than the average depth of the entire treatment site, for example, shallow shoreline areas.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying. **Shake well before using.**

STORAGE AND DISPOSAL

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

STORAGE: Store in original container only. Do not store near feed or foodstuffs. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste.

PESTICIDE DISPOSAL: Wastes resulting from use of this product may be used according to label directions or disposed of at an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (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 INSTRUCTIONS

Fluridone SC is a selective systemic aquatic herbicide for management of aquatic vegetation in fresh water ponds, lakes, reservoirs, drainage canals and irrigation canals. Fluridone SC is absorbed from water by plant shoots and from hydrosoil by the roots of aquatic vascular plants. It is important to maintain the recommended concentration of Fluridone SC in contact with the weeds as long as possible. Rapid water movement or any condition which results in rapid dilution of Fluridone SC in treated water will reduce its effectiveness.

In susceptible plants, Fluridone SC inhibits the formation of carotene. In the absence of carotene, chlorophyll is rapidly degraded by sunlight. Herbicidal symptoms of Fluridone SC appear in seven to ten days and appear as white (chlorotic) or pink growing points. Under optimum growing conditions, 30 to 90 days are required before the desired level of aquatic weed management is achieved with Fluridone SC. Species susceptibility to Fluridone SC may vary, depending on time of year, stage of growth, and water movement. For best results, apply Fluridone SC prior to initiation of weed growth or when weeds begin active growth.

Fluridone SC is not corrosive to application equipment.

SPECIAL PRECAUTIONS

- * Do not apply this product through any type of irrigation system.
- * Obtain required permits. Permits may be required by state or local agencies. Consult with appropriate State or local water authorities before applying this product.
- * In lakes and reservoirs, do not apply Fluridone SC within one-fourth mile (1320 feet) of any functioning potable water intake.

NOTE: Existing potable water intakes which are no longer in use, such as those that have been replaced by potable water wells or connections to a municipal water system, are not considered to be functioning potable water intakes.

- * Irrigation with water treated with Fluridone SC may result in injury to the irrigated vegetation. Those who irrigate from areas treated with Fluridone SC should be informed of the irrigation time frames presented in the table below. These time frames are suggestions which should be followed to reduce the potential for injury to vegetation irrigated with water treated with Fluridone SC.

**Recommended Waiting Periods Before Irrigating
with Water Treated with Fluridone SC
(Days After Application)**

<u>Application Site</u>	<u>Established Tree Crops</u>	<u>Established Row Crops/ Turf/Plants</u>	<u>Newly Seeded Crops/Seedbeds or Areas to be Planted, Including Overseeded Golf Course Greens</u>
Ponds and Static Canals ¹	7	30	30
Canals	7	14	30
Lakes and Reservoirs ²	7	14	14

¹ For purposes of Fluridone SC labeling, a pond is defined as a body of water 10 acres or less in size. A lake or reservoir is greater than 10 acres.

² In lakes and reservoirs where one-half or greater of the body of water is treated, use the pond and static canal irrigation restrictions.

WEED CONTROL INFORMATION

Vascular Aquatic Plants Controlled by Fluridone SC

Floating Plants:

Duckweed, Common (*Lemna minor*)¹

¹ Controlled only with a surface application of Fluridone SC

Emerged Plants:

Spatterdock (*Nuphar luteum*)

Waterlily (*Nymphaea* spp.)

Submersed Plants:

Bladderwort (*Utricularia* spp.)

Coontail, Common (*Ceratophyllum demersum*)

Elodea, Common (*Elodea canadensis*)

Egeria, Brazilian Elodea (*Egeria densa*)

Fanwort, Cabomba (*Cabomba caroliniana*)

Hydrilla (*Hydrilla verticillata*)

Naiad (*Najas* spp.)

Pondweed (*Potamogeton* spp.), except Illinois pondweed

Watermilfoil (*Myriophyllum* spp.)

Shoreline Grasses:

Paragrass (*Brachiaria mutica*)

Vascular Aquatic Plants Partially Controlled by Fluridone SC

- Alligatorweed (*Alternanthera philoxeroides*)
- Canarygrass, Reed (*Phalaris arundinaceae*)
- Cattail (*Typha* spp.)
- Cutgrass, Giant (*Zizaniopsis miliacea*)
- Lotus, American (*Nelumbo lutea*)
- Pondweed, Illinois (*Potamogeton illinoensis*)
- Parrotfeather (*Myriophyllum brasiliense*)
- Smartweed (*Polygonum* spp.)
- Spikerush (*Eleocharis* spp.)
- Torpedograss (*Panicum repens*)
- Watergrass, Southern (*Hydrochloa caroliniensis*)
- Watermeal, Common (*Wolffia columbiana*)²
- Waterprimrose, Creeping (*Ludwigia peploides*)
- Waterpurslane (*Ludwigia palustris*)
- Watershield (*Brasenia schreberi*)

²Partial control only with a surface application of Fluridone SC at the maximum labeled rate.

Vascular Aquatic Plants Not Controlled by Fluridone SC

- Algae (*Chara* and *Nitella*)
- Arrowhead (*Sagittaria* spp.)
- Bacopa (*Bacopa* spp.)
- Big Floatingheart; Banana Lily (*Nymphoides aquatica*)
- Bulrush (*Scirpus* spp.)
- Frogbit, American (*Limnobium spongia*)
- Maidencane (*Panicum hemitomon*)
- Pickerelweed; Lanceleaf (*Pontederia cordata*)
- Rush (*Juncus* spp.)
- Tapegrass; American Eelgrass (*Vallisneria americana*)
- Waterhyacinth, Floating (*Eichornia crassipes*)
- Water Lettuce (*Pistia stratiotes*)
- Water Pennywort (*Hydrocotyle umbellata*)

MIXING AND APPLICATION DIRECTIONS

The aquatic plants present in the treatment site should be identified prior to application to determine their susceptibility to Fluridone SC. It is also important to determine the area (acres)

to be treated and the average depth in order to select the proper application rate. Do not exceed the maximum labeled rate for a given treatment site per annual growth cycle.

Shake Fluridone SC well before using. Add the recommended amount of Fluridone SC to water in the spray tank during the filling operation. Agitate while filling and during spraying. Surface or subsurface application of the spray can be made with conventional spray equipment. Fluridone SC can also be applied near the surface of the hydrosol using weighted trailing hoses. A spray volume of 5 to 100 gallons per acre may be used. Fluridone SC may also be diluted with water and the concentrated mix metered into the pumping system.

Application to Ponds

Fluridone SC may be applied to the entire surface area of a pond. Rates may be selected to provide 0.06 to 0.09 ppm of active ingredient in the treated water. Application rates necessary to obtain these active ingredient concentrations in treated water are shown in the following table. When average water depth of the treatment site is greater than 5 feet, apply 1 to 1.5 quarts of Fluridone SC per treated surface area.

Average Water Depth of Treatment Site (feet)	Quarts of Fluridone SC per Treated Surface Acre
1	0.16 - 0.25
2	0.33 - 0.50
3	0.50 - 0.75
4	0.65 - 1.00
5	0.80 - 1.25

Use the higher rate within the rate range where there is a dense weed mass or when treating more difficult to control species.

Application to Lakes and Reservoirs

For best results in lakes and reservoirs, Fluridone SC treatment areas should be a minimum of 5 acres in size. Treatment of areas smaller than 5 acres or treatment of narrow strips, such as boat lanes or shorelines, may not produce satisfactory results due to dilution by untreated water. In lakes and reservoirs, do not apply Fluridone SC within one-fourth mile (1320 feet) of any functioning potable water intake.

Rates may be selected to provide 0.075 to 0.15 ppm of active ingredient in the treated water. Application rates necessary to obtain these active ingredient concentrations in treated water are shown in the following table. When average water depth of the treatment site is greater than 10 feet, apply 3 to 4 quarts of Fluridone SC per treated surface acre.

Average Water Depth of Treatment Site (feet)	Quarts of Fluridone SC per Treated Surface Acre
1	0.2 - 0.4
2	0.4 - 0.8
3	0.6 - 1.2
4	0.8 - 1.6
5	1.0 - 2.0
6	1.2 - 2.4
7	1.4 - 2.8
8	1.6 - 3.2
9	1.8 - 3.6
- 10	2.0 - 4.0

Use the higher rate within the rate range where there is a dense weed mass or when treating more difficult to control species.

Use Rates for Control of Eurasian Watermilfoil, Curlyleaf Pondweed and Hydrilla in Whole Lake or Reservoir Treatments

The following application rates may be used for control of Eurasian watermilfoil (*Myriophyllum spicatum*), curlyleaf pondweed (*Potamogeton crispus*) and hydrilla (*Hydrilla verticillata*) when treating lakes or reservoirs where little dilution with untreated water is expected to occur. Under these conditions, Fluridone SC may be applied to provide a concentration of 0.01 ppm to 0.02 ppm (10 to 20 ppb) of active ingredient in treated water for Eurasian watermilfoil and curlyleaf pondweed and 0.015 ppm to 0.02 ppm (15 to 20 ppb) for the control of hydrilla. Application rates necessary to achieve these active ingredient concentrations in treated water are shown in the following table. For optimum control, it is recommended that applications be made early in the growing season.

Average Water Depth of Treatment Site (feet)	Quarts or Fluid ounces of Fluridone SC per Treated Surface Acre			
	Eurasian Watermilfoil		Hydrilla	
	Curlyleaf Pondweed		Quarts	Fl. Ounces
1	0.027- 0.05	0.87 - 1.6	0.04 - 0.05	1.28 - 1.6
2	0.05 - 0.11	1.6 - 3.5	0.08 - 0.11	2.56 - 3.5
3	0.08 - 0.16	2.56 - 5.12	0.12 - 0.16	3.84 - 5.12
4	0.11 - 0.22	3.5 - 7.4	0.16 - 0.22	5.12 - 7.4
5	0.14 - 0.27	4.48 - 8.64	0.20 - 0.27	6.4 - 8.64
6	0.16 - 0.32	5.12 - 10.24	0.24 - 0.32	7.68 - 10.24
7	0.19 - 0.38	6.08 - 12.16	0.28 - 0.38	8.96 - 12.16
8	0.22 - 0.43	7.04 - 13.76	0.32 - 0.43	10.24 - 13.76
9	0.24 - 0.49	7.68 - 15.68	0.37 - 0.49	11.84 - 15.68
10	0.27 - 0.54	8.64 - 17.28	0.41 - 0.54	13.12 - 17.28

When treated with these use rates, other less susceptible species listed under Aquatic Plants Controlled may exhibit only temporary injury or stunting followed by recovery and normal growth. These 0.01 to 0.02 ppm rates may be applied where functioning potable water intakes are present.

NOTE: When applications for management of Eurasian watermilfoil are made to only portions of lakes or reservoirs, such as bays or fingers of these water bodies, the higher rates and use directions listed on this label for Application to Lakes and Reservoirs are recommended.

Application Rate Calculation - Ponds, Lakes and Reservoirs

The amount of Fluridone SC to be applied to provide the desired ppm concentration of active ingredient in treated water may be calculated as follows:

$$\text{Quarts of Fluridone SC required per treated surface acre} = \text{Average water depth of treatment site (feet)} \times \text{Desired ppm concentration of active ingredient} \times 2.7$$

For example, the quarts per acre of Fluridone SC required to provide a concentration of 0.075 ppm of active ingredient in water with an average depth of 5 feet is calculated as follows:

$$5 \times 0.075 \times 2.7 = 1.0 \text{ quart per treated surface acre.}$$

When measuring quantities of Fluridone SC, quarts may be converted to fluid ounces by multiplying quarts to be measured by 32. For example, 0.25 quarts x 32 = 8 fluid ounces.

NOTE: Calculated rates should not exceed the maximum allowable rate in quarts per treated surface acre for the water depth listed in the application rate table for the site to be treated.

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Application to Drainage Canals and Irrigation Canals

In drainage and irrigation canals, Fluridone SC should be applied at the rate of 2 quarts per treated surface acre. Where water retention is possible, the performance of Fluridone SC will be enhanced by restricting water flow. In moving bodies of water, use an application pattern that will provide a uniform distribution and avoid concentration of the herbicide.

WARRANTY STATEMENT

GRIFFIN warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. 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, or the manner of use or application, all of which are beyond the control of GRIFFIN. In no case shall GRIFFIN be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. The exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling or application of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid for this product or at GRIFFIN'S election, the replacement of this product. GRIFFIN MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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