

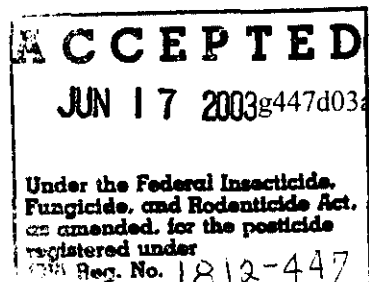
1812-447

06/17/2003

1/12

5/28/03

FLURIDONE SRP AQUATIC HERBICIDE

**Active Ingredient**

Fluridone:

1-methyl-3-phenyl-5-[3-(trifluoromethyl)phenyl]-4(1H)-pyridinone 5.0%

Inert Ingredients 95.0%

Total 100.0%

Contains 2 pounds of fluridone per 40-pound container.

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

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).

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.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

FIRST AID	
IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.

IF INHALED:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.• Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. 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. 1812-447
EPA Est. No.

Net Contents _____

[END OF FRONT PANEL]

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if swallowed, absorbed through skin or inhaled. Avoid breathing dust. 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 untreated water when disposing of equipment washwaters. Trees and shrubs growing in water treated with Fluridone SRP 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.

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, contain material and dispose of 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 SRP is a selective systemic aquatic herbicide for management of aquatic vegetation in fresh water ponds, lakes, reservoirs, drainage canals, irrigation canals and rivers. Fluridone SRP is a pelleted formulation containing 5 percent fluridone. Fluridone SRP is absorbed from water by plant shoots and from hydrosol by the roots of aquatic vascular plants. It is important to

maintain Fluridone SRP in contact with the target plants for as long as possible. Rapid water movement or any condition which results in rapid dilution of Fluridone SRP in treated water will reduce its effectiveness.

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

Fluridone SRP is not corrosive to application equipment.

Water Use Restrictions Following Applications of Fluridone SRP (Days)

Application Rate	Drinking[†]	Fishing	Swimming	Livestock/Pet Consumption	Irrigation²
Maximum Rate (150 ppb) or less	0	0	0	0	7-30

[†] ~~Note below, under Potable Water Intakes, the information for application of Fluridone SRP within ¼ mile (1320 feet) of a functional potable water intake.~~

² ~~Note below, under Irrigation, the specific time frames for each water body type and crop type.~~

The label provides recommendations on the use of a chemical analysis for the active ingredient. Griffin recommends the use of an Enzyme-Linked Immunoassay (ELISA Test) for the determination of the active ingredient concentration in water. Contact Griffin for the utilization of this test, known as AvasTest, for the incorporation of this analysis into your treatment program. Other proven chemical analyses for the active ingredient may also be used. The chemical analysis, AvasTest, is referenced in this label as the preferred method for the rapid determination of the active ingredient in water.

Application rates are provided in pounds of Fluridone SRP to achieve a desired concentration of the active ingredient in parts per billion (ppb). The maximum application rate or sum of all application rates is 90 ppb in ponds and 150 ppb in lakes and reservoirs per annual growth cycle. This maximum concentration is the amount of product calculated as the target application rate, NOT determined by testing the residues of the active ingredient in the treated water.

SPECIAL PRECAUTIONS

- * **Obtain required permits:** Permits may be required by state or local agencies. Consult with appropriate State or local water authorities before applying this product.
- * **Hydroponic Farming:** Do not use water treated with Fluridone SRP for hydroponic farming.
- * **Greenhouse and Nursery Plants:** Do not use water treated with Fluridone SRP for irrigating greenhouse or nursery plants unless use of an approved assay, such as AvasTest, confirms that residues are less than 1 ppb.
- * **Water Use Restrictions Following Applications of Fluridone SRP (Days)**

Application Rate	Drinking ¹	Fishing	Swimming	Livestock/Pet Consumption	Irrigation ²
Maximum Rate (150 ppb) or less	0	0	0	0	See irrigation instructions below

¹ Note below, under Potable Water Intakes, the information for application of Fluridone SRP within ¼ mile (1320 feet) of a functional potable water intake.

² Note below, under Irrigation, the specific time frames or fluridone residues that provide the widest margin of safety for irrigating with water treated with Fluridone SRP.

- * **Potable Water Intakes:** Concentrations of the active ingredient, fluridone, up to 150 ppb are allowed in potable water sources; however, in lakes and reservoirs or other sources of potable water, DO NOT apply Fluridone SRP at application rates greater than 20 ppb within one-fourth mile (1320 feet) of any functioning potable water intake. At application rates of 8 to 20 ppb, Fluridone SRP may be applied where functioning potable water intakes are present.

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

- * **Irrigation:** Irrigation with water treated with Fluridone SRP may result in injury to the irrigated vegetation. Those who irrigate from areas treated with Fluridone SRP should be informed of the irrigation time frames or water assay requirements presented in the table below. These time frames and assay recommendations are suggestions which should be followed to reduce the potential for injury to vegetation irrigated with water treated with Fluridone SRP. There is a greater potential for crop injury when water treated with Fluridone SRP is applied to crops grown on low organic and sandy soils.

**Recommended Waiting Periods Before Irrigating
with Water Treated with Fluridone SRP
(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 Assay required
Canals	7	7	30 Assay required
Rivers	7	7	7 Assay required
Lakes and Reservoirs ²	7	7	7 Assay required

¹ For purposes of Fluridone SRP 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 precautions.

Where the use of Fluridone SRP treated water is desired for irrigating crops prior to the time frames established above, the use of AvasTest is recommended to measure the concentration in the treated water. Where AvasTest has determined that concentrations are less than 10 parts per billion (ppb), there are no irrigation precautions for irrigating established tree crops, established row crops or turf. For tobacco, tomatoes, peppers or other plants within the Solanaceae family and for newly seeded crops or newly seeded grasses, such as overseeded golf course greens, do not use Fluridone SRP treated water if concentrations are greater than 5 parts per billion. Furthermore, when rotating crops, do not plant members of the Solanaceae family in land that has been previously irrigated with fluridone concentrations in excess of 5 ppb. It is recommended that an aquatic specialist be consulted prior to commencing irrigation of these sites.

WEED CONTROL INFORMATION

Fluridone SRP selectivity is dependent upon dosage, time of year, stage of growth, method of application and water movement. The following categories, Controlled, Partially Controlled and Not Controlled, are provided to describe expected efficacy under ideal treatment conditions, using higher to maximum application rates. Use of lower rates will increase selectivity of some species listed as Controlled or Partially Controlled. Additional aquatic plants may be controlled, partially controlled or tolerant to Fluridone SRP. Consult an aquatic specialist prior to application of Fluridone SRP to determine a plant's susceptibility to Fluridone SRP.

Vascular Aquatic Plants Controlled by Fluridone SRP¹

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.), except Variable-Leaf Milfoil

Shoreline Grasses:

Paragrass (*Urochloa mutica*)

¹ Species denoted by an asterisk (*) are native plants that are often tolerant to Fluridone SRP at lower use rates. Please consult an aquatic specialist for recommended Fluridone SRP use rates when selective control of exotic species is desired.

Vascular Aquatic Plants Partially Controlled by Fluridone SRP

Floating Plants:

Salvinia (*Salvinia* spp.)

Emerald Plants:

Alligatorweed (*Alternanthera philoxeroides*)
 Cattail (*Typha* spp.)
 Lotus, American (*Nelumbo lutea*)
 Parrotfeather (*Myriophyllum aquaticum*)
 Smartweed (*Polygonum* spp.)
 Spatterdock (*Nuphar luteum*)
 Spikerush (*Eleocharis* spp.)
 Waterlily (*Nymphaea* spp.)
 Waterprimrose, Creeping (*Ludwigia peploides*)
 Waterpurslane (*Ludwigia palustris*)
 Watershield (*Brasenia schreberi*)

Submersed Plants:

Limnophila (*Limnophila sessiliflora*)
 Pondweed, Illinois (*Potamogeton illinoensis*)
 Tapegrass; American Eelgrass (*Vallisneria americana*)
 Watermilfoil, Variable-Leaf (*Myriophyllum heterophyllum*)

Shoreline Grasses:

Barnyardgrass (*Echinochloa crusgalli*)

Canarygrass, Reed (*Phalaris arundinaceae*)
 Cutgrass, Giant (*Zizaniopsis miliacea*)
 Torpedograss (*Panicum repens*)
 Watergrass, Southern (*Hydrochloa caroliniensis*)

Vascular Aquatic Plants Not Controlled by Fluridone SRP

Floating Plants:

Waterhyacinth, Floating (*Eichornia crassipes*)
 Water Lettuce (*Pistia stratiotes*)

Emersed Plants:

Arrowhead (*Sagittaria* spp.)
 Bacopa (*Bacopa* spp.)
 Big Floatingheart; Banana Lily (*Nymphoides aquatica*)
 Bulrush (*Scirpus* spp.)
 Frogbit, American (*Limnobium spongia*)
 Pickerelweed; Lanceleaf (*Pontederia* spp.)
 Rush (*Juncus* spp.)
 Water Pennywort (*Hydrocotyle* spp.)

Shoreline Grasses:

Maidencane (*Panicum hemitomon*)

NOTE: Algae (*Chara*, *Nitella* and filamentous species) are not controlled by Fluridone SRP.

APPLICATION DIRECTIONS

The aquatic plants present in the treatment site should be identified prior to application to determine their susceptibility to Fluridone SRP. 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.

Application to Ponds

Fluridone SRP may be applied to the entire surface area of a pond. For single applications, rates may be selected to provide 45 to 90 ppb in the treated water, although actual concentrations in treated water may be substantially lower at any point in time due to the slow-release formulation of this product. When treating for optimum selective control, lower rates may be applied for sensitive target species. Use the higher rate within the rate range where there is a dense weed mass, when treating more difficult to control species, and for ponds less than 5 acres in size with an average depth of less than 4 feet. Application rates necessary to obtain these concentrations in treated water are shown in the following table. For additional application rate calculations, refer to the section of this label entitled Application Rate Calculation - Ponds, Lakes and Reservoirs. Split or multiple applications are recommended where dilution of treated water is anticipated; however, the sum of all applications should total 45 to 90 ppb and must not exceed a total of 90 ppb per annual growth cycle.

Average Water Depth of Treatment Site (feet)	Pounds of Fluridone SRP per Treated Surface Acre	
	45 ppb	to 90 ppb
1	2.5	5
2	5	10
3	7.5	15
4	10	20
5	12.5	25
6	15	30
7	17	34
8	19.5	39
9	22	44
10	24.5	49

Application to Lakes and Reservoirs

The following treatments are recommended for treating both whole lakes or reservoirs and partial areas of lakes or reservoirs (bays, etc.). For best results in treating partial lakes and reservoirs, Fluridone SRP 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. Rate ranges are provided as a guide to include a wide range of environmental factors, such as target species, plant susceptibility, selectivity and other aquatic plant management objectives. Application rates and methods should be selected to meet the specific lake/reservoir aquatic plant management goals.

Whole Lake or Reservoir Treatments (Limited or No Water Discharge)

Single Application to Whole Lakes or Reservoirs: Where single applications to whole lakes or reservoirs are desired, apply Fluridone SRP at an application rate of 16 to 90 ppb. Application rates necessary to obtain these concentrations in treated water are shown in the following table. For additional application rate calculations, refer to the section of this label entitled Application Rate Calculation - Ponds, Lakes and Reservoirs. Choose an application rate to meet the aquatic plant management objective. Where greater plant selectivity is desired, such as when controlling Eurasian watermilfoil and curlyleaf pondweed, choose an application rate lower in the rate range. For other plant species, an aquatic specialist should be contacted to determine when to choose application rates lower in the rate range to meet specific plant management goals. Use the higher rate within the rate range where there is a dense weed mass or when treating more difficult to control plant species or in the event of a heavy rainfall event where dilution has occurred. In these cases, a second application or more may be required; however, the sum of all applications cannot exceed 150 ppb per annual growth cycle. Refer to the following section, Split or Multiple Applications to Whole Lakes or Reservoirs, for guidelines and maximum rate allowed.

Average Water Depth of Treatment Site (feet)	Pounds of Fluridone SRP per Treated Surface Acre	
	16 ppb	to 90 ppb
1	0.9	5
2	1.7	10
3	2.6	15
4	3.5	20
5	4.3	25
6	5.2	30
7	6.0	34
8	6.9	39
9	7.8	44
10	8.6	49
11	9.5	54
12	10.4	59
13	11.2	64
14	12.1	68
15	13.0	73
16	13.8	78
17	14.7	83
18	15.6	88
19	16.4	93
20	17.3	98

Split or Multiple Applications to Whole Lakes or Reservoirs: To meet certain plant management objectives, split or multiple applications may be desired in making whole lake treatments. Split or multiple application programs are desirable when the objective is to use the minimum effective dose and to maintain this lower dose for sufficient time to ensure efficacy and enhance selectivity. In these situations, use the lower rates (16 to 75 ppb) within the rate range. In controlling Eurasian watermilfoil and curlyleaf pondweed and where greater plant selectivity is desired, choose an application rate lower in the rate range. For other plant species, an aquatic specialist should be contacted to determine when to choose application rates lower in the rate range to meet specific plant management goals. For split or repeated applications, the sum of all applications must not exceed 150 ppb per annual growth cycle.

NOTE: In treating lakes or reservoirs that contain potable water intakes and the application requires treating within ¼ mile of a potable water intake, no single application can exceed 20 ppb. Additionally, the sum of all applications cannot exceed 150 ppb per annual growth cycle.

Partial Lake or Reservoir Treatments

Where dilution of Fluridone SRP with untreated water is anticipated, such as in partial lake or reservoir treatments, split or multiple applications may be used to extend the contact time with the target plants. The application rate and use frequency of Fluridone SRP in a partial lake is highly dependent upon the treatment area. Higher application rates may be required and frequency of applications will vary depending upon the potential for untreated water to dilute the

Fluridone SRP concentration in the treatment area. Use higher rates where greater dilution with untreated water is anticipated.

Application Sites Greater than ¼ Mile from a Functioning Potable Water Intake: For single applications, apply Fluridone SRP at application rates from 45 to 150 ppb. Split or multiple applications may be made, however, the sum of all applications cannot exceed 150 ppb per annual growth cycle. Split applications should be conducted to maintain a sufficient concentration in the target area for a period of 45 days or longer. The use of AvasTest is recommended to maintain the desired concentration in the target area over time.

Application Sites Within ¼ Mile of a Functioning Potable Water Intake: In treatment areas that are within ¼ mile of a potable water intake, no single application can exceed 20 ppb. When utilizing split or repeated applications of Fluridone SRP for sites which contain a potable water intake, AvasTest is required to determine the actual concentration in the water. Additionally, the sum of all applications cannot exceed 150 ppb per annual growth cycle.

Application Rate Calculation - Ponds, Lakes and Reservoirs

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

$$\begin{array}{lcl} \text{Pounds of Fluridone SRP} & = & \text{Average water depth} \times \text{Desired ppb concentration} \times 0.054 \\ \text{required per treated} & & \text{of treatment site (feet)} \quad \text{of active ingredient} \\ \text{surface acre} & & \text{equivalents} \end{array}$$

For example, the pounds per acre of Fluridone SRP required to provide a concentration of 25 ppb of active ingredient equivalents in water with an average depth of 5 feet is calculated as follows:

$$5 \times 25 \times 0.054 = 6.75 \text{ pounds per treated surface acre.}$$

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

Application to Drainage Canals, Irrigation Canals and Rivers

Static Canals: In static drainage and irrigation canals, Fluridone SRP should be applied at the rate of 20 to 40 pounds per surface acre.

Moving Water Canals and Rivers: The performance of Fluridone SRP will be enhanced by restricting or reducing water flow. In slow moving bodies of water, use an application technique that maintains a concentration of 10 to 40 ppb in the applied target area for a minimum of 45 days. Fluridone SRP can be applied by split or multiple broadcast applications or by metering in the product to provide a uniform concentration of the herbicide based upon the flow pattern. The use of AvasTest is recommended to maintain the desired concentration in the target area over time.

Static or Moving Canals or Rivers Containing a Functioning Potable Water Intake: In treating a static or moving water canal or river which contains a functioning potable water intake,

applications of Fluridone SRP greater than 20 ppb must be made more than ¼ mile from a functioning potable water intake. Applications of less than 20 ppb may be applied within ¼ mile from a functioning potable water intake; however, if applications of Fluridone SRP are made within ¼ mile from a functioning potable water intake, the AvasTest must be utilized to demonstrate that concentrations do not exceed 150 ppb at the potable water intake.

Application Rate Calculation – Drainage Canals, Irrigation Canals and Rivers

The amount of Fluridone SRP to be applied through a metering system to provide the desired ppb concentration of active ingredient in treated water may be calculated as follows:

1. Average flow rate x Average width x Average depth x 0.9 = Cubic feet per second (CFS)
(feet per second) (feet) (feet)
2. CFS x 1.98 = acre-feet per day (water movement)
3. Acre-feet per day x desired ppb x 0.054 = Pounds of Fluridone SRP required per day

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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Griffin and Design are a registered trademark of Griffin Corporation.

[Based on EPA stamped accepted label dated November 9, 2000]