

Avast!™ SRP

AQUATIC HERBICIDE



ACTIVE INGREDIENT

Fluridone: 1-methyl-3-phenyl-5-[3-(trifluoromethyl)phenyl]-4(1*H*)-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, 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.

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

See Label for Additional Precautions and Directions for Use

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 water when disposing of equipment washwaters. Trees and shrubs growing in water treated with Avast! 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

Avast! SRP is a selective systemic aquatic herbicide for management of aquatic vegetation in fresh water ponds, lakes, reservoirs, drainage canals, irrigation canals and rivers. Avast! SRP is a pelleted formulation containing 5 percent fluridone. Avast! SRP is absorbed from water by plant shoots and from hydrosol by the roots of aquatic vascular plants. It is important to maintain Avast! SRP in contact with the target plants for as long as possible. Rapid water movement or any condition which results in rapid dilution of Avast! SRP in treated water will reduce its effectiveness.

In susceptible plants, Avast! SRP inhibits the formation of carotene. In the absence of carotene, chlorophyll is rapidly degraded by sunlight. Herbicidal symptoms of Avast! SRP appear in 7 to 10 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 Avast! SRP. Species susceptibility to Avast! SRP may vary, depending on time of year, stage of growth, and water movement. For best results, apply Avast! 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.

Avast! SRP is not corrosive to application equipment.

Application Rate (150 ppb) or less	Water Use Restrictions Following Applications of Avast! SRP (Days)				Irrigation ²
	Drinking ¹	Fishing	Swimming	Livestock/Pet Consumption	
Maximum Rate (150 ppb) or less	0	0	0	0	7-30

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

²Note 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 Avast! 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 Avast! SRP for hydroponic farming.
- **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 Avast! SRP at application rates greater than 20 ppb within ¼ mile (1320 feet) of any functioning potable water intake. At application rates of 8 to 20 ppb, Avast! 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 Avast! SRP may result in injury to the irrigated vegetation. Those who irrigate from areas treated with Avast! SRP 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 Avast! SRP. There is a greater potential for crop injury when water treated with Avast! SRP is applied to crops grown on low organic and sandy soils.

Recommended Waiting Periods Before Irrigating with Water Treated with Avast! SRP (Days After Application)

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

¹For purposes of Avast! 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.

²In lakes and reservoirs where ½ or greater of the body of water is treated, use the pond and static canal irrigation restrictions.

Where the use of Avast! SRP treated water is desired for irrigating crops prior to the time frames established above, the use of AvastTest is recommended to measure the concentration in the treated water. Where AvastTest has determined that concentrations are less than ten parts per billion, 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 grasses, such as overseeded golf course greens, do not use Avast! SRP treated water if concentrations are greater than five parts per billion.

WEED CONTROL INFORMATION

Avast! 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 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 Avast! SRP. Consult an aquatic specialist prior to application of Avast! SRP to determine a plant's susceptibility to Avast! SRP.

Vascular Aquatic Plants Controlled by Avast! 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*)

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

Vascular Aquatic Plants Partially Controlled by Avast! SRP

Floating Plants:

Salvinia (*Salvinia* spp.)

Emerged 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 Avast! SRP

Floating Plants:

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

Emerged 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 Avast! SRP.

APPLICATION DIRECTIONS

The aquatic plants present in the treatment site should be identified prior to application to determine their susceptibility to Avast! 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

Avast! 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 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 Avast! SRP per Treated Surface Acre	
	45 ppb	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, Avast! 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 Avast! 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 Avast! SRP per Treated Surface Acre		Average Water Depth of Treatment Site (feet)	Pounds of Avast! SRP per Treated Surface Acre	
	16 ppb	to 90 ppb		16 ppb	to 90 ppb
1	0.9	5	11	9.5	54
2	1.7	10	12	10.4	59
3	2.6	15	13	11.2	64
4	3.5	20	14	12.1	68
5	4.3	25	15	13.0	73
6	5.2	30	16	13.8	78
7	6.0	34	17	14.7	83
8	6.9	39	18	15.6	88
9	7.8	44	19	16.4	93
10	8.6	49	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 Avast! 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 Avast! 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 Avast! 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 Avast! 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 Avast! 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 Avast! SRP to be applied to provide the desired ppb concentration of active ingredient equivalents in treated water may be calculated as follows:

$$\text{Pounds of Avast! SRP required per treated surface acre} = \text{Average water depth of treatment site (feet)} \times \text{Desired ppb concentration of active ingredient equivalents} \times 0.054$$

For example, the pounds per acre of Avast! 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, Avast! SRP should be applied at the rate of 20 to 40 pounds per surface acre.

Moving Water Canals and Rivers: The performance of Avast! 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 area for a minimum of 45 days. Avast! 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 Avast! 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 Avast! 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 Avast! 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 (feet per second) x Average width (feet) x Average depth (feet) x 0.9 = Cubic feet per second (CFS)
2. CFS x 1.98 = acre-feet per day (water movement)
3. Acre-feet per day x desired ppb x 0.054 = Pounds of Avast! 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.