

Jacket



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number:
12014-59

Date of Issuance:

NOTICE OF PESTICIDE:
 X Registration
 Reregistration

(under FIFRA, as amended)

Term of Issuance:
Conditional

Name of Pesticide Product:
AV-90 Plus Algaecide

Name and Address of Registrant (include ZIP Code):

A & V, Inc.
N62 W22632 Village Drive
Sussex, WI 53089

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.

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.

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 its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration 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 listed below before you release the product for shipment:

a. Add the phrase, "EPA Reg. No. 12014-59".

b. You should delete "Do not use this product where KOI fish are present". This product is not intended for use in ornamental ponds where these fish are likely to be present and fish hazard statements appear on the label.

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Signature of Approving Official:

Date:

c. Since this product is in Toxicity Category I - DANGER, the Statement of Practical Treatment must appear on the front panel.

d. Add the headings:

STORAGE AND DISPOSAL

PESTICIDE DISPOSAL

e. Since this product is in Toxicity Category I, the Pesticide Disposal section must read as follows:

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Refer to PR Notice 83-3.

3. Submit one (1) copy of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

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

Cynthia Giles-Parker
Product Manager (22)
Fungicide-Herbicide Branch
Registration Division (7505C)

Enclosure

Jacket

AV-90 PLUS ALGAECIDE

FOR USE IN POTABLE WATER RESERVOIRS
FARM, FISH AND FIRE PONDS, LAKES AND
FISH HATCHERIES.

ACTIVE INGREDIENTS:

Copper as elemental*.....	9.09%
INERT INGREDIENTS:.....	90.91%
TOTAL	100.00%

Contains .91 lb. of elemental copper per gallon.

*From mixed Copper Ethanolamine Complexes/

KEEP OUT OF REACH OF CHILDREN

DANGER

See side panel for additional precautions.

NET CONTENTS: 55 GALLONS

EPA REG. NO.: 12014-
EPA EST. NO.: 12014-WI-1

ACCEPTED
with COMMENTS
to EPA Letter Draft

MANUFACTURED BY
A & V INCORPORATED
N62 W22632 VILLAGE DR
SUSSEX WI 53089

12014-59

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PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER

Corrosive. Causes irreversible eye damage and skin irritation. Due to corrosive nature, may be harmful or fatal if swallowed. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield when handling. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Do not apply undiluted solution of this product directly to, or otherwise permit it to come into contact with any desirable plants as injury may result. Wash spray equipment thoroughly before and after each application.

STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Flush with plenty of water. Call a physician.

IF SWALLOWED: Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. DO NOT INDUCE VOMITING. Avoid alcohol. Do not give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

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

ENVIRONMENTAL HAZARDS

This product may be toxic to fish. Toxicity of this product to fishes dependent upon the carbonate hardness of the water. Do not use this product in water having less than 50 ppm carbonate hardness. Do not use this product where KOI fish are present.

This product under field conditions, is effective in controlling a broad range of algae including: Chara, Spirogyra, Cladophora, Vaucheria, Ulothrix, Microcystis, and Oscillatoria. This product has also been proven effective in controlling the rooted aquatic plant, Hydrilla verticillata. The ethanolamines in this product prevent the precipitation of copper with carbonates and bicarbonates in the water. Waters treated with this product may be used for swimming, fishing, drinking, livestock watering or irrigating turf, ornamental plants or crops immediately after treatment.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

SURFACE SPRAY/INJECTION ALGAECIDE APPLICATION

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For effective control, proper chemical concentration should be maintained for a minimum of three hours contact time. The application rates in the chart are based on static or minimal flow situations. Where significant dilution or loss of water from unregulated inflows or outflows occur (raceways) within a three hour period, chemical may have to be metered in.

Identify the algae growth present as one of the following types: Planktonic (suspended), Filamentous (mat-forming), or Chara/Nitella.

Determine the surface acreage (1 acre = 43,560 sq. ft.) and average depth of infested area.

Refer to chart below to determine gallons of this product to apply per surface acre.

APPLICATION RATES
GALLONS PER SURFACE ACRE

ALGAE TYPE	PPM COPPER	DEPTH IN FEET			
		1	2	3	4
Planktonic	0.2	0.6	1.2	1.8	2.4
Filamentous	0.2	0.6	1.2	1.8	2.4
Chara/Nitella	0.4	1.2	2.4	3.6	4.8

For planktonic (suspended) algae and free-floating filamentous algae mats, application rates should be based on treating only the upper 3 to 4 feet of water where algae is growing. Under conditions of heavy infestation treat only 1/3 to 1/2 of the water body at a time to avoid fish suffocation caused by oxygen depletion from decaying algae. Before applying dilute the required amount of this product with enough water to ensure even distribution with the type of equipment being used. For most effective results apply under calm and sunny conditions when water temperature is at least 60 degree F. Break up floating algae mats before spraying or while application is being made. Use hand or power sprayer adjusted to rain-sized droplets. Spray shoreline areas to avoid trapping fish.

HERBICIDE APPLICATION (for Hydrilla Control)

Control of Hydrilla verticillata can be obtained from copper concentrations of 0.4 to 1.0 ppm resulting from this product's treatment. Choose the application rate based upon stage and density of Hydrilla growth and respective water depth from the chart below.

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APPLICATION RATES
GALLONS/SURFACE ACRE*

GROWTH STAGE/ RELATIVE DENSITY	PPM COPPER	DEPTH IN FEET					
		1	2	3	4	5	6
Early Season/ Low Density	0.4	1.2	2.4	3.6	4.8	6.0	7.2
	0.5	1.5	3.0	4.5	6.0	7.5	9.0
	--0.6--	--1.8--	--3.6--	--5.4--	--7.2--	--9.0--	--10.8--
Midseason/ Moderate Density	0.7	2.1	4.2	6.3	8.4	10.5	12.6
	--0.8--	--2.4--	--4.8--	--7.3--	--9.6--	--12.0--	--14.4--
Late Season/ High Density	0.9	2.7	5.4	8.1	10.8	13.5	16.2
	1.0	3.0	6.0	9.0	12.0	15.0	18.0

*Application rates for depths greater than six feet may be obtained by adding the rates given for the appropriate combination of depths. Application rates should not result in excess of 1.0 ppm copper concentration within treated water.

DIQUAT TANK MIX

On waters where enforcement of use restrictions for recreational, domestic and irrigation use are acceptable, the following mixture can be used as an alternative Hydrilla control method.

Tank mix 3-1/3 gallons of this product with 2 gallons of DIQUAT. Apply mixture at the rate of 5-1/3 gallons per surface acre. Dilute with at least 9 parts water and apply as a surface or underwater injection. Observe all cautions and restrictions on the labels of both products used in this mixture.

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DRIP SYSTEM APPLICATION

FOR USE IN POTABLE WATER AND IRRIGATION CONVEYANCE SYSTEMS

This product should be applied as soon as algae or Hydrilla begins to interfere noticeably with normal delivery of water (clogging of lateral headgates, suction screens, weed screens, and siphon tubes). Delaying treatment could perpetuate the problem causing massing and compacting of plants. Heavy infestations and low flow may cause pool chemical distribution resulting in unsatisfactory control. Under these conditions increasing water flow rate during application may be necessary.

Prior to treatment it is important to accurately determine water flow rates. In the absence of weirs, orifices, or similar devices which give accurate waterflow measurements, volume of flow may be estimated by the following formula:

$$\text{Average Width (feet)} \times \text{Average Depth} \times \text{Velocity* (feet/second)} \times 1.9 = \text{Cubic Feet per Second (C.F.S.)}$$

*Velocity is the time it takes a floating object to travel a given distance. Dividing the distance traveled (feet) by the time (seconds) will yield velocity (feet/second). This measurement should be repeated at least three times in the intended application site and then averaged.

After accurately determining the water flow rate in C.F. S. or gallons/minute, find the corresponding drip rate chart below.

WATER FLOW RATE			CHEMICAL DRIP RATE*		
C.F.S.	Gal./Min.	Qts./Hr.	ml/Min.	Fl.Oz./Min.	
1	450	1	16	0.5	
2	900	2	32	1.1	
3	1350	3	47	1.6	
4	1800	4	63	2.1	
5	2250	5	79	2.7	

Calculate the amount of this product needed to maintain the drip rate for a period of 3 hours by multiplying Qts./Hr. x 3; ml/Min. x 180; of Fl. Oz/Min. x 180. Dosage will maintain 1.0 ppm Copper concentration in the treated water for the 3 hour period. Introduction of the chemical should be made in the channel at weirs or other turbulence-creating structures to promote the dispersion of chemical.

Pour the required amount of this product into a drum or tank equipment with a brass needle valve and constructed to maintain a constant drip rate. Use a stop watch and appropriate measuring container to set the desired drip rate. Readjust accordingly if flow rate changes during the 3 hour treatment period.

Distance of control obtained down the waterway will vary depending upon density of vegetation growth. Periodic maintenance treatments may be required to maintain seasonal control.

GENERAL TREATMENT NOTES

The following suggestions apply to the use of this product as an algaecide or herbicide in all approved use sites.

For optimum effectiveness, ...

Apply early in the day under calm, sunny conditions when water temperatures are at least 60 degrees F.

Treat when growth first begins to appear or create a nuisance, if possible.

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Apply in a manner that will ensure even distribution of the chemical within the treatment area.

Re-treat areas if regrowth begins to appear and seasonal control is desired. Allow one to two weeks between consecutive treatments.

Allow seven to ten days to observe the effects of treatment (bleaching and breaking apart of plant material).

Storage and Disposal

A. STORAGE INSTRUCTIONS:

This product should be stored only in this original container and placed in a cool and dry locked storage area. Keep away from other pesticides, fertilizer, food, and feed to prevent cross-contamination.

In case of spillage, dilute with water and wash up with water.

B. PRODUCT DISPOSAL INSTRUCTIONS:

Do not contaminate water, food, or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

C. CONTAINER DISPOSAL:

DO NOT REUSE EMPTY CONTAINER. Triple rinse. Then offer for recycling, or reconditioning, or puncture and dispose of in a sanitary landfill, or incinerate, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

NOTICE

Neither the manufacturer, nor the seller makes any warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of the use of this product when such use is contrary to label instructions. Read and follow label directions carefully.

Contents may cause bluing where marcite has been etched.

PERMITS

Some states may require permits for the application of this product to public waters. Check with your local authorities.

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