

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



United States
Environmental Protection
Agency

Office of Pesticide Programs

Ms. Jayne Walz
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

DEC 30 2009

Subject: Aquathol K Aquatic Herbicide
EPA Reg. No.: 70506-176
Amendment application dated July 21, 2008

Dear Ms. Walz,

The amendment referred to above, submitted in connection under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, has been reviewed. The requested amendment is acceptable, provided you comply with all data requirements necessary for the continued registration of the active ingredient endothall, and the following label modifications are made:

1. Per the acute toxicity review performed during reregistration this product, the "IF ON SKIN" heading in the First Aid Statements must be revised to read, "IF ON SKIN OR CLOTHING."
2. The First Aid Statements must be placed in the following order:
 - a. IF IN EYES
 - b. IF SWALLOWED
 - c. IF ON SKIN OR CLOTHING
 - d. IF INHALED
3. The Agency recommends that additional text be added to the Note to Physician that addresses eye and skin irritation concerns.
4. The PPE section must be revised to read:
 - a. "Mixers, loaders, applicators and other handlers must wear:
 - i. "Coveralls over long-sleeved shirt and long pants,
 - ii. Chemical-resistant footwear plus socks,
 - iii. Chemical-resistant gloves made of any waterproof material,
 - iv. Goggles or face shield,
 - v. Chemical-resistant headgear for overhead exposure,
 - vi. Chemical-resistant apron when mixing, loading, or cleaning equipment, and
 - vii. A NIOSH-approved respirator with a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C or any N, R, P or HE filter.

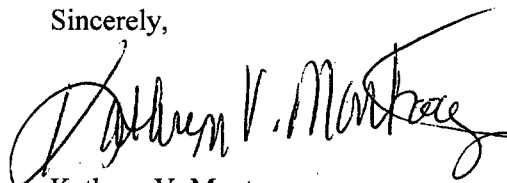
- viii. Exception: During application, the respirator need not be worn, provided that the pesticide is applied in a manner (such as direct metering or subsurface release from the rear of a vessel that is moving into the wind) such that the applicator will have no contact with the pesticide.
 - ix. See Engineering Controls for additional requirements."
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- 5. Per the RED, the User Safety Recommendations text must be revised to read:
 - a. "User should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
 - b. User should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
 - c. User should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing."
 - 6. Per the endothall RED, the statement, "Aerial application is prohibited" must be added to the label.
 - 7. Per the RED, the Environmental Hazards Statement must be revised to read as follows: "This pesticide is toxic to fish. This pesticide is toxic to wildlife. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters or rinsate."
 - 8. The remaining text in the Environmental Hazards statement must be relocated to the Directions for Use.
 - 9. The text "Do not use where fish are important resources" must be added to the label.
 - 10. The word "General" in "General Information" must be changed to "Product."
 - 11. Note: While the Container Disposal language in the Storage and Disposal section of the label submitted for review fulfills current requirements, the registrant should consider updating their labeling to meet the requirements of Pesticide Registration (PR) Notice 2007-4: Labeling Revisions Required by the Final Rule "Pesticide Management and Disposal: Standards for Pesticide Containers and Containment." For further information, please refer to EPA Web Site: http://www.epa.gov/PR_Notices/pr2007-4.pdf.
 - 12. List the amount of endothall acid equivalents contained per gallon of product, and describe the application rate in terms of ppm endothall acid equivalents rather than as dipotassium endothall.
 - 13. Submit 1 copy of the final printed label before releasing this 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. The amended label supersedes all previous labeling for this

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product. A copy of the label stamped "Accepted with Comments" is included for your records. If you have any questions, please contact Kathryn Montague (703-305-1243 or montague.kathryn@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kathryn V. Montague". The signature is fluid and cursive, with a large initial 'K' and a long, sweeping underline.

Kathryn V. Montague
Acting Product Manager 23
Herbicide Branch
Registration Division (7505P)

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AQUATHOL® K

AQUATIC HERBICIDE

ACTIVE INGREDIENT:

Dipotassium salt of endothall*

40.3%

OTHER INGREDIENTS:

59.7%

TOTAL

100.0%

*7-oxabicyclo [2.2.1]heptane-2,3-dicarboxylic acid equivalent 28.6%

Contains per gallon 4.23 lbs. dipotassium endothall

**ACCEPTED
with COMMENTS**

In EPA Letter Dated:

DEC 30 2009

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

70506-176

**KEEP OUT OF REACH OF CHILDREN
DANGER**

FIRST AID

IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
- Call a poison control center or doctor for treatment advice.

IF INHALED:

- Move person to fresh air.
- If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for treatment advice.

IF SWALLOWED:

- 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 by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF ON SKIN:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

HOT LINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact (303) 623-5716 for emergency medical treatment information.

NOTE TO PHYSICIAN: Measures against circulatory shock, respiratory depression, and convulsion may be needed.

EPA Registration No. 70506-176

EPA Establishment No. 4581-MI-1

United Phosphorus, Inc.

630 Freedom Business Center, Suite 402

King of Prussia, PA 19406

Net Contents:

GENERAL INFORMATION

AQUATHOL K is a liquid concentrate soluble in water which is effective against a broad range of aquatic plants with a margin of safety to fish.

Dosage rates indicated for the application of AQUATHOL K are measured in "Parts Per Million" (ppm) of dipotassium endothall. Only 0.5 to 5.0 ppm are generally required for aquatic weed control, whereas some fish species are tolerant to approximately 100 ppm or over.

DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift.

HOW TO APPLY:

AQUATHOL K is a contact herbicide; consequently, do not apply before weeds are present. Application as early as possible after weeds appear and are actively growing is recommended for best results.

If an entire pond is treated at one time, or if the dissolved oxygen level is low at time of application, decay of weeds may remove enough oxygen from the water, causing fish to suffocate. Water containing very heavy vegetation should be treated in sections to prevent suffocation of fish. Sections should be treated 5-7 days apart. Carefully measure size and depth of area to be treated and determine amount of AQUATHOL K to apply from chart.

AQUATHOL K should be sprayed on the water or injected below the water surface and should be distributed as evenly as possible. It may be applied as a concentrate or diluted with water depending on the equipment. Some dilution will give better distribution. For best results apply when water is quiescent and/or flows are minimal.

In instances where the weed(s) to be controlled is an exposed surface problem (i.e., some of the broad-leaved pond weeds) coverage is important. For best results apply the concentrate or with the least amount of water compatible with the application equipment.

Necessary approval and/or permits should be obtained in states where required.

Do not contaminate water intended for domestic purposes.

Drinking Water (Potable Water)

- Consult with appropriate state or local water authorities before applying this product to public waters. State or local agencies may require permits. The drinking water (potable water) restrictions on this label are to ensure that consumption of water by the public is allowed only when the concentration of endothall in the water is less than the MCL (Maximum Contamination Level) of 0.1 ppm. Applicators should consider the unique

characteristics of the treated waters to assure that endothall concentrations in potable drinking water do not exceed 0.1 ppm at the time of consumption.

- For applications of endothall, the drinking water setback distance from functioning potable water intakes is greater than or equal to 600 feet.
- Note: Existing potable water intakes that are no longer in use, such as those replaced by a connection to a municipal water system or a potable water well, are not considered to be functioning potable water intakes.

Only use higher rates when making treatments to small areas with an increased potential for rapid dilution or when making long and narrow applications such as for boat lanes or shoreline treatments where dilution may reduce the exposure of plants and the herbicide.

Use lower rates for large contiguous treatment blocks or in protected areas such as coves where reduced water movement will not result in rapid dilution of the herbicide from the target treatment area or when treating entire lakes or ponds.

AQUATIC WEEDS CONTROLLED AND DOSAGE RATE CHARTS

AQUATHOL K is recommended for the control of the following aquatic weeds in irrigation and drainage canals, ponds and lakes at the rates indicated. Since the active ingredient is water soluble and tends to diffuse from the treated area, select the dosage rate applicable to the area to be treated. Use the lower rate in each range of rates where the growth is young and growing and/or where the weed stand is not heavy. Marginal treatments of large bodies of water require higher rates as indicated.

Aquatic Weed	RATES			
	Entire Pond/ Lake or Large Area Treatment	Gallons per Acre Ft.	Spot or Lake Margin Treatment	Gallons per Acre Ft.
Bur Reed, Sparganium spp.	3.0-4.0 ppm	1.9-2.6 gal.	4.0-5.0 ppm	2.6-3.2 gal.
Coontail, Ceratophyllum, spp	1.0-2.0 ppm	0.6-1.3 gal	2.0-3.0 ppm	1.3-1.9 gal.
Horned Pondweed, Zannichellia palustris	1.0-2.0 ppm	0.6-1.3 gal.	2.0-3.0 ppm	1.3-1.9 gal.
Hydrilla, Hydrilla verticillata	2.0-3.0 ppm	1.3-1.9 gal	3.0-4.0 ppm	1.9-2.6 gal.
Hygrophila, Hygrophila polysperma	4.0-5.0 ppm	2.6-3.2 gal.	5.0 ppm	3.2 gal.
Milfoil, Myriophyllum spp.	2.0-3.0 ppm	1.3-1.9 gal.	3.0-4.0 ppm	1.9-2.6 gal
Naiad, Najas spp.	1.0-3.0 ppm	0.6-1.9 gal.	2.0-4.0 ppm	1.3-2.6 gal.
Pondweed, Potamogeton spp Including:	0.5-3.0 ppm	0.3-1.9 gal.	1.5-4.0 ppm	1.0-2.6 gal.
American, P. nodosus	2.0-3.0 ppm	1.3-1.9 gal.	3.0-4.0 ppm	1.9-2.6 gal.
Largeleaf (Bass Weed), P. amplifolius	2.0-3.0 ppm	1.3-1.9 gal.	3.0-4.0 ppm	1.9-2.6 gal.
Curlyleaf, P. crispus	0.5-1.5 ppm	0.3-1.0 gal.	1.5-3.0 ppm	1.0-1.9 gal.
Flatstem, P. zosterformis	2.0-3.0 ppm	1.3-1.9 gal.	3.0-4.0 ppm	1.9-2.6 gal.
Floating-leaf, P. natans	1.0-2.0 ppm	0.6-1.3 gal.	2.0-3.0 ppm	1.3-1.9 gal.
Illinois, P. illinoensis	1.5-2.5 ppm	1.0-1.6 gal	2.5-3.5 ppm	1.6-2.3 gal.
Narrowleaf, P. pusillus	1.0-2.0 ppm	0.6-1.3 gal.	2.0-3.0 ppm	1.3-1.9 gal.
Threadleaf, P. filiformis	2.0-3.0 ppm	1.3-1.9 gal	3.0-4.0 ppm	1.9-2.6 gal.
Sago, P. pectinatus	1.0-2.0 ppm	0.6-1.3 gal	2.0-3.0 ppm	1.3-1.9 gal.
Variable Leaf, P. diversifolius	1.0-2.0 ppm	0.6-1.3 gal	2.0-3.0 ppm	1.3-1.9 gal.
Parrot Feather, Myriophyllum aquaticum	2.0-3.0 ppm	1.3-1.9 gal.	3.0-4.0 ppm	1.9-2.6 gal.
Water Stargrass, Heteranthera spp	2.0-3.0 ppm	1.3-1.9 gal.	3.0-4.0 ppm	1.9-2.6 gal.

RATE OF APPLICATION---LAKES AND PONDS

The following chart indicates the total quantity of material to be applied.

APPROXIMATE GALLONS OF AQUATHOL K FOR ONE ACRE (208' times 208') TREATMENT

DEPTH	DOSAGE IN GALLONS FOR VARIOUS CONCENTRATIONS IN PPM						
	0.5 ppm	1.0 ppm	1.5 ppm	2.0 ppm	3.0 ppm	4.0 ppm	5.0 ppm
1 ft.	0.3	0.6	1.0	1.3	1.9	2.6	3.2
2 ft.	0.6	1.3	1.9	2.6	3.8	5.1	6.4
4 ft.	1.3	2.6	3.8	5.1	7.7	10.2	12.8
6 ft.	1.9	3.8	5.8	7.6	11.5	15.3	19.2

RATE OF APPLICATION---IRRIGATION AND DRAINAGE CANALS

Apply in a manner to achieve the desired rate and adequate mixing so the product is distributed throughout the entire water column. Adequate concentration (rate) and exposure time (length of treatment) will impact the efficacy of the herbicide (endothall) on the target weed species. Although endothall is a contact herbicide adequate exposure time is critical. The rates and the length of treatment are guidelines to provide control of the target species and assume that the entire canal is treated. This rate chart has been developed based on Concentration Exposure Time (CET) data for endothall. The CET concept allows rates and the length of exposure to be adjusted for different treatment scenarios.

Target Weed: Milfoil (Myriophyllum spp.) Parrot Feather (Myriophyllum sp.) Pondweeds (Potamogeton spp.)	0.5-1.0 ppm	1.0-2.0 ppm	2.0-3.0 ppm	3.0-4.0 ppm	4.0-5.0 ppm	Restriction A maximum of 30ppm per growing season, not to exceed 5ppm per application.
Length of Treatment	48 hrs	24 hrs	12 hrs	8 hrs	6 hrs	
Target Weed: Coontail (Ceratophyllum spp.) Horned Pondweed (Zannichellia sp.) Hydrilla (Hydrilla verticillata) Naiad (Najas spp.) Water Stargrass (Heteranthera spp.)	0.5-1.0 ppm	1.0-2.0 ppm	2.0-3.0 ppm	3.0-4.0 ppm	4.0-5.0 ppm	A minimum of a 7-day application interval, with no PHI.
Length of Treatment	72 hrs	36 hrs	18 hrs	12 hrs	8 hrs	
Hygrophila (Hygrophila polysperma) may be suppressed with higher rates.						

To calculate the amount of Aquathol K required for a particular treatment use the following formula;

[CFS X Length of Treatment (hrs) X rate (ppm)] x 0.052947 = Gallons of Aquathol K needed for treatment

To calculate the amount of Aquathol K to be applied per hour use the following formula:

Gallons of Aquathol K per hour = Total gallons of Aquathol K / Length of Treatment (hrs)

The "Directions For Use" of this product reflect the cumulative inputs from both historical field use and product testing programs. Actual field conditions may vary. Phytotoxicity is not expected, however all crop (species) and cultivars (varieties) have not been tested.

Precautions: Crops have been shown to exhibit tolerance to endothall, however environmental and physiological stress may cause some crops to be susceptible.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER

CORROSIVE. CAUSES IRREVERSIBLE EYE DAMAGE. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING. AVOID BREATHING VAPORS OR SPRAY MIST. PROLONGED OR FREQUENTLY REPEATED SKIN CONTACT MAY CAUSE ALLERGIC REACTIONS IN SOME INDIVIDUALS.

Personal Protective Equipment (PPE)

Mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Socks and shoes
- a NIOSH-approved respirator with a dust/mist filter with MSHN/NIOSH approval number prefix TC-21C or any N, R, P, or HE filter.

Exception: During application, the respirator need not be worn, *provided* that the pesticide is applied in a manner (such as direct metering or subsurface release from the rear of a vessel that is moving into the wind) that the applicator will have no contact with the pesticide.

- Chemical resistant gloves
- Protective eyewear

See engineering controls for additional options.

User Safety Requirements:

Follow the manufacturers' instructions for cleaning/maintaining PPE. If no such instructions for washable exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

Engineering Controls:

When mixers and loaders use a closed system designed by the manufacturer to enclose the pesticide to prevent it from contacting handlers or other people AND the system is functioning properly and is used and maintained in accordance with the manufacturers' written operating instructions, the handlers need not wear a respirator, provided the required respirator is immediately available for use in an emergency such as a spill or equipment breakdown.

User Safety Recommendations:

Users should:

- Wear appropriate protective eyewear such as goggles, face shield, or safety glasses.
- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE 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

This pesticide is toxic to fish. This pesticide is toxic to wildlife.

Do not contaminate water by cleaning of equipment or disposal of equipment wash waters. Do not contaminate water, food or feed by storage or disposal.

Avoid contact with or drift to other crops or plants as injury may result. Wash out spray equipment with water after each operation.

Not for use in brackish or saltwater.

Do not use water from treated areas for watering livestock or for domestic purposes within the following periods:

Up to 0.5 ppm dipotassium salt ---7 days after application

Up to 4.25 ppm dipotassium salt ---14 days after application

Up to 5.0 ppm dipotassium salt ---25 days after application

Treated water can be used for sprinkling bentgrass immediately.

EMERGENCY TELEPHONE NUMBERS

CHEMTREC: (800) 424-9300

MEDICAL: (303) 623-5716

Rocky Mountain Poison Control Center

STORAGE AND DISPOSAL

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

Pesticide Storage Instructions: Store in the original container. Do not store in a manner where cross-contamination with other pesticides, fertilizers, food or feed could occur. Storage at temperatures below 32°F may result in the product freezing or crystallizing. Should this occur the product must be warmed to 50°F or higher and thoroughly agitated. In the event of a spillage during handling or storage, absorb with sand or other inert material and dispose of absorbent in accordance with the Pesticide Disposal Instructions listed below.

Pesticide Disposal Instructions: 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.

Container Disposal Instructions: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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**IMPORTANT INFORMATION
READ BEFORE USING PRODUCT**

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OR MERCHANTABILITY OF OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.