

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



Office of Pesticide Programs

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

Subject: Hydrothol 191 Aquatic Algicide and Herbicide
EPA Reg. No.: 70506-175
Amendment application dated July 21, 2008

DEC 30 2009

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 endothal, 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 ON SKIN OR CLOTHING
 - c. IF SWALLOWED
 - 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.”
5. The text, “Wear protective clothing, rubber gloves or face shield when handling” is incomplete, and must be deleted from the Hazards to Humans and Domestic Animals section of the label.
 6. 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.”
 7. Per the endothall RED, the statement, “Aerial application is prohibited” must be added to the label.
 8. 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.”
 9. The text, “Fish may be killed by dosages in excess of 0.3 ppm. Avoid contact with or drift to desirable plants or crops as injury may result. Clean out application equipment after each operation. Not for use in brackish or salt water,” currently in the Environmental Hazards statement, must be relocated to the Directions for Use.
 10. The text “Do not use where fish are important resources” must be added to the label.
 11. The word “General” in “General Information” must be changed to “Product.”
 12. The text, “Hydrothall 191 is for use on the following aquatic weeds: Hydrilla, *Elodea Canadensis*, Cabomba*, Bur weed,* Brazilian Elodea, Vallisneria, and Hygrophilia*” must be revised per the RED to read:
 - a. “**Lakes and Ponds (Except Irrigation Canals/Ditches):** Use of endothall N,N-dimethylalkylamine salt is **limited to algae and the following plants:** Hygrophilia*, Vallisneria, Hydrilla, Cabomba*, Bur weed*, *Elodea canadensis*, and Brazilian elodea.” *Not for this use in CA.
 13. 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

70506-175
Comments, Page 3

- 14. 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 .
- 15. 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 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,



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

HYDROTHOL 191

AQUATIC ALGICIDE AND HERBICIDE

ACTIVE INGREDIENT:

Mono(N,N-dimethylalkylamine**) salt of endothall*	53.0%
OTHER INGREDIENTS:	47.0%
TOTAL	100.0%

Contains 2 lb. endothall* per gallon

*7-oxabicyclo [2.2.1] heptane-2,3-dicarboxylic acid equivalent 23.36%

**Alkyl groups as derived from Coconut Oil

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: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

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.

70506-175

EPA Registration No. 70506-175

EPA Establishment No. 4581-MI-1

United Phosphorus, Inc.

630 Freedom Business Center, Suite 402

Net Contents _____

King of Prussia, PA 19406

1 800-438-6071

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.

GENERAL INFORMATION

HYDROTHOL 191 is a liquid concentrate soluble in water and is a highly effective aquatic herbicide and algicide for use in irrigation and drainage canals, lakes and ponds. Apply when weeds and algae are actively growing. Note: Susceptibility of algae may vary due to subspecies, strains or environmental conditions. Dosage rates are measured in parts per million (ppm) endothall acid.

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.

Do not contaminate water intended for domestic purposes. Do not use treated water for animal consumption or for domestic purposes within the following periods:

- 0.3 ppm— 7 days after application
- 3.0 ppm—14 days after application
- 5.0 ppm—25 days after application

LAKES AND PONDS

ALGAE CONTROL: HYDROTHOL 191 is effective on a broad range of planktonic, filamentous, and branched algae. Note: Susceptibility of algae may vary due to subspecies, strains or environmental conditions. Generally rates of 0.05 to 0.3 ppm (0.6-3.6 pints per acre foot) are effective for the control of algae. Repeat applications when algae reappear and reach treatment levels. Dosages may be increased (from 0.3 to 1.5 ppm) where greater longevity of control is desired or to improve efficacy on species that prove difficult to control. Due to the potential for fish toxicity at higher rates, it is

suggested that applications above 0.3 ppm be made only by commercial applicators as marginal or sectional treatments.

SUBMERGED AQUATICS: Apply HYDROTHOL 191 at 0.7 gallons to 4.0 gallons per acre foot (0.5 to 3.0 ppm) for control of aquatic weeds. HYDROTHOL 191 is for use on the following aquatic weeds: Hydrilla, *Elodea canadensis*, Cabomba*, Bur weed*, Brazilian Elodea, Vallisneria and Hygrophila*. Due to the toxicity to fish, the use of HYDROTHOL 191 for submerged aquatic weeds is suggested only by commercial applicators on a marginal or sectional rather than overall type treatment. Use dosages over 1.0 ppm only on very narrow margins or in areas where some fish kill is not objectional. Do not treat more than 1/10 of the lake or pond at one time with doses in excess of 1.0 ppm.

*Not for this use in California

RATE OF APPLICATION: LAKES AND PONDS

Algae or Weed	Rate (ppm)	Amount per Acre Ft.
Algae Planktonic, Filamentous Branched (Use in California limited to Cladophora, Pithophora, Spirogyra, Chara)	0.05-1.5	0.6-18.0 pints
Bur Reed*	2-3	2.7-4.0 gal.
Cabomba*	2-3	2.7-4.0 gal.
Brazilian Elodea	2-3	2.7-4.0 gal.
Elodea Canadensis	2-3	2.7-4.0 gal.
Hydrilla	1-2	1.4-2.7 gal.
Hygrophila*	2-3	2.7-4.0 gal.
Vallisneria	2-3	2.7-4.0 gal.

*Not for this use in California

HYDROTHOL 191 Rates for Irrigation 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 Species	Rates	Duration	Restriction
Algae: Planktonic, Filamentous, Branched (Use in CA limited to Cladophora, Pithophora, Spirogyra, Chara)	0.05 – 1.5 ppm	6 – 120 hours	
Weeds Bur Reed* Cabomba* Coontail Elodea Canadensis Hydrilla Hygrophila* Milfoil(s) Naiad (Najas spp.) Pondweed (Potamogeton spp.) Water Stargrass* Vallisneria Zannichellia	0.2 – 5 ppm	6 – 120 hours	A maximum of 30ppm per growing season, not to exceed 5ppm per application. A minimum of a 7-day application interval, with no PHI

* Not for this use in CA

To calculate the amount of Hydrothol 191 required for a particular treatment use the following formula;

$$[\text{CFS} \times \text{Length of Treatment (hrs)} \times \text{rate (ppm)}] \times 0.11198 = \text{Gallons of Hydrothol 191 needed for treatment}$$

To calculate the amount of Hydrothol 191 to be applied per hour use the following formula:

$$\text{Gallons of Hydrothol 191 per hour} = \text{Gallons of Hydrothol 191} / \text{Length of Treatment (hrs)}$$

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 AND SKIN BURNS. MAY BE FATAL IF SWALLOWED, OR ABSORBED THROUGH SKIN. HARMFUL IF INHALED. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING. AVOID BREATHING VAPOR OR SPRAY MIST. WEAR PROTECTIVE CLOTHING, RUBBER GLOVES, AND GOGGLES OR FACE SHIELD WHEN HANDLING.

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 products 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.

Fish may be killed by dosages in excess of 0.3 ppm.

Avoid contact with or drift to desirable plants or crops as injury may result.

Clean out application equipment after each operation.

Not for use in brackish or salt water.

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. In the event of 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 by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

EMERGENCY TELEPHONE NUMBERS:

CHEMTREC: (800) 424-9300

MEDICAL: (303) 623-5716 Rocky Mountain Poison Control Center

2/2

**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.