

4581-174

07/15/1988

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JUL 15 1988

Mr. Andrew A. Davidson  
 Pennwalt Corporation  
 Agrichemicals Division  
 Three Parkway  
 Philadelphia, PA 19102

Dear Mr. Davidson:

Subject: Revised Restrictions - Irrigation  
 Hydrothal 191 Aquatic Algicide and Herbicide  
 EPA Registration No. 4581-174 ✓  
 Hydrothal 191 Granular Aquatic Algicide and  
 Herbicide  
 EPA Registration No. 4581-172  
 Your Submissions Dated June 22, 1988

The amendments referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, are acceptable provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:
  - a. Delete "Do not use treated water for irrigation of crops."  
 It is understood your intent was to delete the statement as it conflicts with the new text stipulating intervals for holding water before irrigation use, depending on dosage rate used. We will reassess this labeling and data base under reregistration review for endothall.
  - b. Under EPA Registration No. 4581-174, the signal word DANGER and POISON (in red) did not reproduce on the copy submitted. It is understood these items will be retained on the final, printed labeling.

51038:I:Mountfort:LMF-12:KENCO:7/8/88:7/19/88:CB:VO:EK:CB

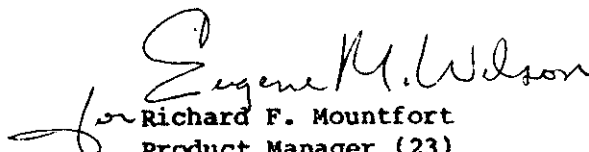
CONCURRENCES

SYMBOL							
SURNAME							
DATE							

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2. Submit one (1) copy of each final printed labeling before you release the product for shipment. A stamped copy of each draft label is enclosed for your records.

Sincerely yours,

  
for Richard F. Mountfort  
Product Manager (23)  
Fungicide-Herbicide Branch  
Registration Division (TS-767C)

Enclosures

# HYDROTHOL-191

## AQUATIC ALGICIDE AND HERBICIDE

### ACTIVE INGREDIENT

Mono(N,N-dimethylalkylamine\*\*) salt of endosulfate

53.0%

### INERT INGREDIENTS

47.0%

### TOTAL

100.0%

Contains 2 lb. endosulfate 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

### STATEMENT OF PRACTICAL TREATMENT

**IF SWALLOWED**, drink promptly a large quantity of milk, egg whites, gelatin solution or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

**IF ON SKIN**, immediately flush with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before reuse.

**IF IN EYES**, immediately flush with plenty of water for at least 15 minutes. Call a physician.

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

See Back Panel for Additional Precautionary Statements

**NOTE:** For GENERAL INFORMATION and DIRECTIONS FOR USE refer to accompanying brochure.

Net Contents 1 U.S. Gallon/3.785 Liters

EPA Registration No. 4581-174  
EPA Establishment No. 228-IL-1

**AGCHEM DIVISION-PENNWALT CORPORATION**

Philadelphia, PA 19102

ACCEPTED  
with COMMENTS  
in EPA Letter Dated:

JUL 15 1988

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

4581-174

**PRECAUTIONARY STATEMENTS****HAZARDS TO HUMANS  
(AND DOMESTIC ANIMALS)****DANGER**

FATAL IF ABSORBED THROUGH SKIN. MAY BE FATAL IF SWALLOWED. CORROSIVE, CAUSES IRREVERSIBLE EYE DAMAGE AND SKIN BURNS. HARMFUL IF INHALED. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING. WEAR PROTECTIVE CLOTHING, RUBBER GLOVES, AND GOGGLES OR FACE SHIELD WHEN HANDLING. Wash thoroughly with soap and water after handling and before eating or smoking. Remove contaminated clothing and wash before reuse. Avoid breathing spray mist.

**ENVIRONMENTAL HAZARDS**

Fish will be killed by dosages in excess of 0.3 ppm. Do not use where fish are important resources.

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

Clean out application equipment after each operation.

Do not use fish from treated water for food or feed within 3-days of treatment. Do not use treated water for watering livestock, for preparing agricultural sprays for food crops, for irrigation, or for domestic purposes within the following periods:

Up to 0.3 ppm— 7 days after application

Up to 3.0 ppm—14 days after application

Up to 5.0 ppm—25 days after application

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**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 to control the following weeds and algae: *Najas*, *Elodea*, Coontail, *Potamogeton*, Milfoil sp., *Zannichellia*, *Vallisneria*, *Cladophora*, *Pithophora*, *Spirogyra*, and *Chara*, when weeds are actively growing. Dosage rates indicated are measured in "Parts per Million" (ppm). 1.0 ppm as a dosage rate means that there would be 1 part endothall (acid) in 1,000,000 parts of water.

Necessary approval and/or permits should be obtained in States where required. Consult state water or conservation authorities before applying to public waters or to ponds, canals or streams which flow into public waters.

**DIRECTIONS FOR USE**

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

**IRRIGATION AND DRAINAGE CANALS**

Apply HYDROTHOL 191 as a surface spray with uniform coverage or inject under the surface of the water. The minimum contact time with weeds for optimum results should be two hours.

**HEAVY INFESTATION**—Apply at rate of 4.0 to 6.75 gal. per acre foot (equivalent to 3.0-5.0 ppm). See table below.

**MODERATE TO LIGHT INFESTATION**—Apply at rate of 1.4 to 2.7 gal. per acre foot (equivalent to 1.0-2.0 ppm). See table below.

GALLONS OF HYDROTHOL 191 REQUIRED TO TREAT 1 MILE OF DITCH 1 FOOT DEEP

	Width of Ditch or Canal in Feet									
ppm	4	5	8	10	12	14	16	18	20	22
1.0 ppm	0.7	1.0	1.3	1.7	1.9	2.3	2.6	2.9	3.3	3.6
2.0 ppm	1.3	2.0	2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2
3.0 ppm	2.0	2.8	3.9	4.9	5.9	6.8	7.8	8.8	9.8	10.8
4.0 ppm	2.6	3.9	5.2	6.6	7.8	9.1	10.4	11.8	13.1	14.4
5.0 ppm	3.2	4.9	6.5	8.2	9.7	11.5	13.1	14.7	16.4	18.0

Note: 1.1 qt. HYDROTHOL 191 per acre foot equals 0.1 ppm of endothall (acid).  
Do not use treated water for irrigation of crops.

**LAKES AND PONDS**

**ALGAE CONTROL:** *Cladophora*, *Pithophora*, *Spirogyra*, and *Chara* can be controlled with applications of 0.6 to 2.2 pints per acre foot (0.05 to 0.2 ppm) applied as a uniform surface spray or injected under water surface. *Pithophora* may require 0.2 ppm or higher. Dosages may be increased to 0.4 to 1.1 gals. (0.3 to 0.8 ppm) where greater longevity of control is desired and for marginal treatments. Repeat treatments when algal growth reappears.

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**SUBMERGED AQUATICS:** 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 0.7 to 3.4 gals. per acre foot (0.5 to 2.5 ppm) on a marginal treatment either sprayed on or injected below the surface. Use dosages over 1.0 ppm only on very narrow margins or in areas where some fish kill is not objectionable.

Do not treat more than 1/10 of the lake at one time with doses in excess of 1.0 ppm.

APPROXIMATE QUANTITY OF HYDROTHOL 191 FOR ONE ACRE\* TREATMENT

Depth	Dosages for Various Concentrations in ppm									
	0.05	0.1	0.2	0.3	0.5	0.8	1.0	2.0	2.5	
1 ft	0.6 pts	1.1 pts	2.2 pts	0.4 gal	0.7 gal	1.1 gal	1.4 gal	2.7 gal	3.4 gal	
2 ft	1.1 pts	2.2 pts	4.3 pts	0.8 gal	1.4 gal	2.2 gal	2.8 gal	5.4 gal	6.8 gal	
4 ft	2.2 pts	4.3 pts	8.6 pts	1.6 gal	2.7 gal	4.4 gal	5.4 gal	10.9 gal	13.6 gal	
6 ft	3.3 pts	6.5 pts	12.9 pts	2.5 gal	4.1 gal	6.5 gal	8.2 gal	16.3 gal	20.4 gal	

\*One acre equals approximately 208' x 208'

#### WARRANTY AND DISCLAIMER

Pennwalt Corporation warrants that this material conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use, subject to the risks referred to therein. PENNWALT MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL PENNWALT OR SELLER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, BUSINESS REPUTATION, OR CUSTOMERS' LABOR COST, OR OTHER EXPENSES INCURRED IN PLANTING OR HARVESTING.

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Printed in U.S.A.

### STORAGE AND DISPOSAL

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

**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 absorbant 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.